

09/674266

526 Rec'd PCT/PTO 30 OCT 2000

Sequence Listing

<110> metaGen Gesellschaft für Genomforschung mbH

<120> Human Nucleic Acid Sequences From Pancreas Tumor Tissue

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<140> PCT/DE99/01258

<141> 1999-04-19

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Sequenzprotokoll

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<210> 8
<211> 1020
<212> DNA
<213> homo sapiens

<400> 8

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| | | | | | | |
|--------------|--------------|--------------|------------|-------------|--------------|------|
| ttgacccatc | tctgacagtt | agagccgata | tacttggaag | atattcaaac | cgtctctatg | 600 |
| cttacgaacc | tgcagataca | gctctgttgc | ttgacaacat | gaagaaagct | ctcaagttgc | 660 |
| tgaagactga | attgtaaaga | aaaaaaaaatct | ccaagccctt | ctgtctgtca | ggccttgaga | 720 |
| cttgaaacca | gaagaagtgt | gagaagactg | gctagtgtgg | aagcatagt | aacacactga | 780 |
| ttaggttatg | gtttaatgtt | acaacaacta | ttttttaaga | aaaacaagtt | ttagaaattt | 840 |
| ggtttcaagt | gtacatgtgt | gaaaacaata | ttgtatacta | ccatagttag | ccatgatttt | 900 |
| ctaaaaaaaa | aaataaatgt | tttgggggtg | ttctgttttc | tccaaaaaaaa | aaaaaaaaaaaa | 960 |
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<210> 9
 <211> 718
 <212> DNA
 <213> homo sapiens

<400> 9

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| caggaagagg | agctgggtgag | aagacagcga | aatggcgctt | cgggcccccg | gccccgcttc | 120 |
| cggcggtcc | ggggaggttag | acgagctgtt | cgacgtaaag | aacgccttct | acatcggcag | 180 |
| ctaccagcag | tgcataaacg | aggcgcacgg | gtgaagctgt | caagcccaga | gagagacgtg | 240 |
| gagagggacg | tcttctctgta | tagagcgtac | ctggcgagaa | ggaagtctcg | tgtggtcctg | 300 |
| gatgagatca | agccctcctc | ggcccttgag | ctccaggccg | tgcgcatgtt | tgctgactac | 360 |
| ctcgcacacg | agagtcggag | ggacagcatc | gtggccgagc | tggaccgaga | gatgagcagg | 420 |
| agcgtggacg | tgaccaaacac | caccttctctg | ctcatggccg | cctccatcta | tctccacgac | 480 |
| cagaacccgg | atgccgccct | gcgtgcgctg | caccaggggg | acagcctgga | gtgcacagcc | 540 |
| atgacagtgc | agatcctgct | gaagctggac | cgcctggacc | tgcgccgga | ggagctgaag | 600 |
| agaatgcagg | acctggacga | ggatgccacc | ctcaccagc | tcaaggtctt | ggtaagcttg | 660 |
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<210> 10
 <211> 1202
 <212> DNA
 <213> homo sapiens

<400> 10

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| ccgctgcgtg | cctgcgggtg | gggaccagtg | cagggaccgg | gtcgcgccgt | gctatggccc | 120 |
| tgtaccacac | tgaggagcgc | ggccagccct | gctcgcagaa | ttaccgcctc | ttctttaaga | 180 |
| atgtaactgg | tcactacatt | tccccctttc | atgatattcc | tctgaagggtg | aactctaaag | 240 |
| aggaaaatgg | cattcctatg | aagaaagcac | gaaatgatga | atatgagaat | ctgtttaata | 300 |
| tgattgtaga | aatacctcgg | tggacaaatg | ctaaaatgga | gattgccacc | aaggagccaa | 360 |
| tgaatcccat | taaacaatat | gtaaaggatg | gaaagctacg | ctatgtggcg | aatatcttcc | 420 |
| cttacaaggg | ttatatatgg | aattatggta | ccctccctca | gacttgggaa | gatccccatg | 480 |
| aaaaagataa | gagcacgaac | tgctttggag | ataatgatcc | tattgatgtt | tgcgaaatag | 540 |
| gctcaaagat | tctttcttgt | ggagaagtta | ttcatgtgaa | gataccttga | attttggctc | 600 |
| ttattgatga | aggtgaaaca | gattggaaat | taattgctat | caatgcgaat | gatcctgaag | 660 |
| cctcaaagtt | tcatgatatt | gatgatgtta | agaagttcaa | accgggttac | ctggaagcta | 720 |
| ctcttaattg | gttttagatta | tataagggtac | cagatggaaa | accagaaaac | cagtttgctt | 780 |
| ttaatggaga | attcaaaaac | aaggcttttg | ctcttgaagt | tattaaatcc | actcatcaat | 840 |
| gttggaagc | attgcttatg | aagaagtgtg | atggaggagc | tataaattgc | acaaacgtgc | 900 |
| agatatctga | tagccctttc | cgttgccactc | aagagggaagc | aagatcatta | gttgaatcgg | 960 |
| tatcatcttc | accaaataaa | gaaagtaatg | aagaagagca | agtgtggcac | ttccttggca | 1020 |
| agtgattgaa | acatctgaaa | ttctgctgtc | aagattccca | tctctaagga | ctccaagtgc | 1080 |
| tagagacaag | ggggtctatg | agcatttact | gacttctctg | taaaacttca | ttttttcaaa | 1140 |
| ctttttgagc | tatgcaatat | ataaataaac | agtaagaatt | ttaaattaaa | aaaaaaaaaaaa | 1200 |
| aa | | | | | | 1202 |

<210> 11
 <211> 1610
 <212> DNA
 <213> homo sapiens

<400> 11

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ccccggggag cggttggctg ggaccgtgcg cgtgcgcctg ggggcaccgc tgccgttccg 180
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<210> 12

<211> 2155

<212> DNA

<213> homo sapiens

<400> 12

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| cgctcatcaat | tatgacatgc | cagaggagat | tgagaactat | gtacaccgga | ttggccgcac | 1620 |
| cgggcgctcg | ggaaacacag | gcatcgccac | taccttcac | aacaaagcgt | gtgatgagtc | 1680 |
| agtgtgatg | gacctcaaag | cgctgctgct | agaagccaag | cagaagggtg | cgcccgctg | 1740 |
| gcagggtgctg | cattgcgggg | atgagtccat | gctggacatt | ggaggagagc | gcggctgtgc | 1800 |
| cttctgcggg | ggcctgggtc | atcggtacac | tgactgcccc | aaactcgagg | ctatgcagac | 1860 |
| caagcagggtc | agcaacatcg | gtcgcaagga | ctacctggcc | cacagctcca | tggacttctg | 1920 |
| agccgacagt | cttcccttct | ctccaagagg | cctcagctcc | caagactgcc | accagtctac | 1980 |
| acatacagca | gccccctgga | cagaatcagc | atttcagctc | agctggcctg | gaatgggcca | 2040 |
| ggctgggtcct | ggctgcctgt | tccctgtgct | cttcagaatt | actgtttttg | tttcctttta | 2100 |
| ccccagctgc | cattaaagcc | caaacctcta | gccccaaaaa | aaaaaaaaaa | aaaaa | 2155 |

<210> 13
 <211> 1743
 <212> DNA
 <213> homo sapiens

<400> 13

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| tgctcgcccg | acggctccca | gggagagcag | acgcgccaga | cgcgccaccc | tcggggcgcc | 120 |
| gacggtcacg | gagcatgggg | tcggcctttg | agcgggtagt | ccggagagtg | gtccaggagc | 180 |
| tggaccatgg | tggggagtgc | atccctgtga | ccagcctgca | gagctccact | ggcttccagc | 240 |
| cctactgcct | ggtgggttag | aagccctcaa | gctcatgggt | ctggaaaccc | cggtataagt | 300 |
| gtgtcaacct | gtctatcaag | gacatcctgg | agccggatgc | cgcggaacca | gacgtgcagc | 360 |
| gtggcaggag | cttccacttc | tacgatgcca | tggatgggca | gatacagggc | agcgtggagc | 420 |
| tggcagcccc | aggacaggca | aagatcgagc | gcggggccgc | ggtgtctgac | agctccagca | 480 |
| cctcaatgaa | tgtgtactcg | ctgagtgtgg | accctaacac | ctggcagact | ctgctccatg | 540 |
| agaggcacct | gcggcagcca | gaacacaaa | tcctgcagca | gctgcgcagc | gcggggacaa | 600 |
| cgtgtacgtg | gtgactgagg | tgctgcagac | acagaaggag | gtggaagtca | cgcgcaccca | 660 |
| caagcgggag | ggctcggggc | ggttttcctc | gcccggagcc | acgtgcttgc | agggtgaggg | 720 |
| ccaggggcat | ctgagccaga | agaagacggt | caccatcccc | tcaggcagca | ccctcgcat | 780 |
| ccgggtggcc | cagctgggta | ttgactctga | cttggacgtc | cttctcttcc | cggataagaa | 840 |
| gcagaggacc | ttccagccac | ccgcgacagg | ccacaagcgt | tccacgagcg | aaggcgctg | 900 |
| gccacagctg | ccctctggcc | tctccatgat | gaggtgcctc | cacaacttcc | tgacagatgg | 960 |
| ggtccctgcg | gagggggcgt | tactgaaga | cttccagggc | ctacgggcag | aggtggagac | 1020 |
| catctccaag | gaactggagc | ttttggacag | agagctgtgc | cagctgctgc | tggagggcct | 1080 |
| ggaggggggtg | ctgcgggacc | agctggccct | gcgagccttg | gaggaggcgc | tggagcaggg | 1140 |
| ccagagcctt | gggcccgtgg | agcccctgga | cggctccagca | ggtgctgtcc | tggagtgcct | 1200 |
| ggtgtgtgct | tccggaatgc | tggtgcggga | actcgctatc | cctgttgtct | acctgctggg | 1260 |
| ggcactgacc | atgctgagtg | aaacgcagca | caagctgctg | gcggaggcgc | tggagtgcga | 1320 |
| gacctgtgtg | gggcccgtcg | agctggtggg | cagcctcttg | gagcagagtg | ccccgtggca | 1380 |
| ggagcgcaga | ccatgtccct | gccccccggg | ctcctgggga | acagctgggg | cgaaggagca | 1440 |
| ccggcctggg | tcttgctgga | cgagtgtggc | ctagagctgg | gggaggacac | tccccacgtg | 1500 |
| tgctgggagc | cgcaggccca | gggcccgcag | tgtgactctc | acgcctccct | ggcactgcta | 1560 |
| tcaggactga | gccaggagcc | ccactagcct | gtgcccgggc | atggcctggc | agctctccag | 1620 |
| cagggcagag | tgtttgcccc | ccagctgcta | gccctaggaa | ggccaggagc | ccagtagcca | 1680 |
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<210> 14
 <211> 970
 <212> DNA
 <213> homo sapiens

<400> 14

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| actctctctc | cccttccctt | gcccagctct | gttgaatgct | gctgtgcgcg | tgtgagggcc | 120 |
| gctctgcaca | cagggccctt | gggttgtgtg | aactgaaatt | ctccctgtat | ttgtgagact | 180 |
| cgcaggagtc | cccatctgta | gcacaggcaa | tgccagtgcc | atgctgcagc | ctcagaaacc | 240 |
| aggcctctca | ctccagcagc | aggcagaacc | gtgtctgtgg | tcgggtgctg | tccacagctc | 300 |
| tgtctgcctt | gttcttgggc | ttgagctgga | tagaggtggg | gtctcttcac | cttccctgaa | 360 |
| ttcagaacag | accctgtgcc | tggccccagt | gtgcccaggc | aattccccag | gccctcattg | 420 |

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970

<210> 15
 <211> 2003
 <212> DNA
 <213> homo sapiens

<400> 15

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2003

<210> 16
 <211> 2279
 <212> DNA
 <213> homo sapiens

<400> 16

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```

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<210> 19
<211> 1702
<212> DNA
<213> homo sapiens
<400> 19

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<210> 20
<211> 802
<212> DNA
<213> homo sapiens

<400> 20

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<210> 21
<211> 1647
<212> DNA
<213> homo sapiens

<400> 21

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<210> 22
<211> 1170
<212> DNA
<213> homo sapiens

<400> 22

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<210> 23

<211> 1259

<212> DNA

<213> homo sapiens

<400> 23

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<210> 24

<211> 1021

<212> DNA

<213> homo sapiens

<400> 24

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1021

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<210> 25
 <211> 1407
 <212> DNA
 <213> homo sapiens

<400> 25

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1407

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<210> 26
 <211> 286
 <212> DNA
 <213> homo sapiens

<400> 26

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tgatgccggg tgtggtgagt gccgcgggga cccagggtgc cgcctcgat gaggtcccgg240
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<210> 27
 <211> 815
 <212> DNA

<213> homo sapiens

<400> 27

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<210> 28

<211> 548

<212> DNA

<213> homo sapiens

<400> 28

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<210> 29

<211> 493

<212> DNA

<213> homo sapiens

<400> 29

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<210> 30

<211> 1063

<212> DNA

<213> homo sapiens

<400> 30

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| | | | | | | |
|-------------|-------------|-------------|------------|------------|------------|------|
| tgagatggcc | cgggagggcc | cacagcacac | ccacatcgat | gtgcacatcc | accaggagtc | 180 |
| tgccctggcc | aagctcctgc | tcacctgctg | ctctgcgctg | cggccccggg | ccaccaggc | 240 |
| caggggcagc | agccggctgc | tgggtggcctc | gtgggtgatg | cagatcgctg | tggggatctt | 300 |
| gagtgcagtc | ctaggaggat | ttttctacat | ccgcgactac | accctcctcg | tcacctcggg | 360 |
| agctgccatc | tggacagggg | ctgtggctgt | gctggctgga | gctgctgcct | tcatttacga | 420 |
| gaaacggggt | ggtacatact | gggccctgct | gaggactctg | ctagcgtctg | cagctttctc | 480 |
| cacagccatc | gctgccctca | aactttggaa | tgaagatttc | cgatatggct | actcttatta | 540 |
| caacagtgcc | tgcgcgatct | ccagctcgag | tgactggaac | actccagccc | ccactcagag | 600 |
| tccagaagaa | gtcagaaggc | tacacctatg | tacctccttc | atggacatgc | tgaaggcctt | 660 |
| gttcagaacc | cttcaggcca | tgtcttggg | tgtctggatt | ctgctgcttc | tggcatctct | 720 |
| ggccctctctg | tggctgtact | gctggagaat | gttcccaacc | aaagggaaaa | gagaccagaa | 780 |
| ggaaatggtg | gaagtcagtg | gaatctagcc | atgcctctcc | tgattattag | tgcttggctg | 840 |
| ttctgcaccg | ggcgctccctg | catctgactg | ctggaagaag | aaccagactg | aggaaaagag | 900 |
| gctcttcaac | agccccagtt | atcctggccc | catgaccgtg | gccacagccc | tgctccagca | 960 |
| gcacttgccc | attccttaca | ccccttcccc | atcctgctcc | gcttcatgtc | ccctcctgag | 1020 |
| tagtcatgtg | ataataaact | ctcatgttat | tgttcccaaa | aaa | | 1063 |

<210> 31

<211> 472

<212> DNA

<213> homo sapiens

<400> 31

| | | | | | | |
|------------|------------|-------------|-------------|------------|------------|-----|
| cggtctgagg | cggcgcgatg | gcggcggggc | tggcgcggtt | cctgttgctc | ctcgggctct | 60 |
| cggccggcgg | gcccgcgcgg | gcaggtgcag | cgaagatgaa | ggtggtggag | gagcccaacg | 120 |
| cgtttggggg | gaacaacccg | ttcttgccctc | aggccagtcg | cctccaggcc | aagagggatc | 180 |
| cttcacccgt | gtctggaccc | gtgcatctct | tccgactctc | gggcaagtgc | ttcagcctgg | 240 |
| tggatgccac | gtacaagtat | gagttctgcc | cgttccacaa | cgtgaccag | cacgagcaga | 300 |
| ccttcgcgtg | gaacgcctac | agtgggattc | ctggcatctg | gcacgagtg | gagatcgcca | 360 |
| acaacacctt | cacgggcatg | tggatgaggg | acgggtgacga | ctgccgttcc | cggagccggc | 420 |
| agagcaaggt | ggagctggcg | tgtgcgagcc | cgagcaactg | cgtctaaggg | gt | 472 |

<210> 32

<211> 2568

<212> DNA

<213> homo sapiens

<400> 32

| | | | | | | |
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| catctctctg | cagtgccttc | ctcgccctgtg | cagcccgccg | acccacaggc | tcacccctcc | 60 |
| tgcgggctgc | cagaagcccc | ctccagcagg | gcctctctcc | gtggccccag | cttcactctc | 120 |
| tccctcagca | catgcctctg | tggaggcccc | agccctccgt | ggacagcagg | ggccacgtgg | 180 |
| agcccgggcc | gctcaccctg | gacccagtgc | tggccgcctt | cttggtgcca | aacccccctc | 240 |
| ccccacccag | agactgggca | gctgtgtctg | gttcgttctt | tgcactaacc | acatttgtca | 300 |
| tctctagggc | aggetggggc | tgcgggctga | gggggaccgc | tggcaccccc | cttccctccc | 360 |
| ttcttgggtc | catttccatc | catgacaggt | acagcatccc | aggagcccg | cctgaggggc | 420 |
| tggacccgag | cgggctgtga | acatccctca | gcccctgctg | tcccccttg | ggactaacca | 480 |
| ctaacctcac | ccccaaactc | cacgggtgcc | cctagctggc | ccagagccgg | cagtgtgagc | 540 |
| ccaagtccgg | gctggagccg | aggccggagc | agctgtctgg | gagtcaaggc | tgcagttagc | 600 |
| tttcttcatg | gggtgctcca | gggggtgcca | cagaccgaca | ggcagcccaa | gggcctggac | 660 |
| accctccccc | aggcaggtgc | tgccccagga | ggactgtcct | cgggaatgaa | cctcccgcgg | 720 |
| gctttggact | gaggtccctg | tggcctcggg | ctcctcccca | tgaagtggga | gcgaggctcc | 780 |
| ccaatggtgc | ttttggcttt | agtgtacgat | gtttgtctgt | cttcccgcgg | tggagggcag | 840 |
| agccacccca | catcaggatc | ggacgtgcta | ccccctccgg | tcccggccct | ggcccagcca | 900 |
| gcccagccct | cgaggctcga | tgctgtgccc | aaggccaggg | gcagccagag | ggcagctgga | 960 |
| tggccacgtg | caggggtcaa | ggctggggcc | ctcagtgggg | cggggccgcca | gccccagcag | 1020 |
| tttacagacg | catggctctt | cctcccagag | cagccggcag | ctacctggac | cggaaatgtc | 1080 |
| ctcatccctt | ccctggggcc | aggctctgcc | ctggccttcc | tctgtgaacc | cctcctttct | 1140 |
| ttgtgctggg | gtctgggacc | aaaaaggggg | aatatgggag | ggcagagtgg | ggaggggagt | 1200 |
| ccatgggcct | ggggccccaa | gccggggcgt | ctgagctccc | caggcatgac | caaacctcag | 1260 |
| tggaggggcc | tctgcttcag | gccccgcctg | gctgacattc | tgagccccc | tcggaggccc | 1320 |
| cgccacagcc | aacctgcccc | gtctttcttc | tgggcttgac | ccgccaggga | gttctccagg | 1380 |

| | | | | | |
|------------|-------------|------------|-------------|------------|----------------|
| cctagggcca | ggagagaggc | cctggcaccc | tggcgtgggt | gcccgccaaa | cgccctgcga1440 |
| ccgctcagaa | gcacaaatgc | tgtccatggc | cgtgaggctg | cctgccaggt | gaatggacat1500 |
| agcgtgagag | gcgggtgaggc | cagggcttcc | agcctcgtgc | tgtctcggga | ctcctgaccg1560 |
| tgggtgtcgt | gtgtgcccgt | ctgtgacttt | ctactcacca | agggtgaaga | aaggaaacgg1620 |
| ggaaaatcaa | aaggggttca | aacccccact | cagtaggtgg | aggggagcgc | ctgccattgg1680 |
| ttgtattttt | gttctgagtt | ttcgggtgcc | tgttccctaac | tactccatcc | catgacctcg1740 |
| ccacacctac | tggggcatct | ggctggtgcc | tgttgccatg | gccagccccc | actctcacccl800 |
| tgcacagggg | gtcttgacgc | ccccaggccc | acagcctcgt | tgggaggaca | gggtggccct1860 |
| ggggacaaga | gggaggagcc | caggggctta | cctcactgag | agtgtctccc | agcaggcatc1920 |
| cactacccca | gggcccccca | catgtcatgg | caaggttggt | agtgaatggg | cctggttggg1980 |
| agcagccctt | ggcccatgtg | ccaccacccc | atctcactat | gcaattcgag | ttccaagcaa2040 |
| catttgctcc | tgccttgggg | ccagctctgc | cccagccctg | agaggggtgg | tgaggcagcc2100 |
| ccctggaccc | cagaacccca | gacaaggggg | caggcggggg | accagggcct | ctcctgtggg2160 |
| atctttgttt | tgtgtttaac | cataatgggt | gtgtactgaa | ccacttcata | tttgttatat2220 |
| ataatatata | tatatataat | ctccttaaga | ctcagcctcc | tggtttacct | ccccggcctg2280 |
| ggcatctgac | ctccccacc | ccagtgtgat | ttaacatcca | ggaactgagg | cctgaaccat2340 |
| tttgcatttc | ccccctctcc | agcctctgta | gggccatggc | tgtatgtact | gtcgtgtgt2400 |
| ttttttgttt | tttttagaact | gggtttgggg | gctgattttt | atctcttttg | gggctttttt2460 |
| tcttgccaaa | tactaaaaat | ctcgtcaatg | taattttctg | ggtttctatt | cagcttgggt2520 |
| ttcatgtttt | aaaataaatt | ttaaaaagca | aaaaaaaaaa | aaaaaaaaaa | 2568 |

<210> 33
 <211> 239
 <212> DNA
 <213> homo sapiens

<400> 33

| | | | | | |
|------------|------------|------------|-------------|------------|---------------|
| cgcgatggcg | gcggggctgg | cgcggtctct | gttgcctctc | gggctctcgg | ccggcgggcc 60 |
| cgcgccggca | ggtgcagcga | agatgaaggt | ggtggaggag | cccaacgcgt | ttgggtgagc120 |
| agcctcgcgg | gctggcggct | cgagcggggg | acggcccggg | cccgttcccc | gctgaccttg180 |
| ccgcttcccc | taggtggaac | aacccgttct | tgccctcaggc | cagtcgcctc | caggccaag 239 |

<210> 34
 <211> 482
 <212> DNA
 <213> homo sapiens

<400> 34

| | | | | | |
|------------|------------|------------|------------|------------|---------------|
| ctccaagctt | ggcctggcca | acactcggta | ggcagaatga | tcacctccgt | tgtttcaggt 60 |
| actctgtgtt | tatttatgca | acagttcatg | taaaatggag | acgaggccag | aagaatcctt120 |
| gagcagacag | agccagttgg | gcctcctaag | tgaccttaac | cttgcttgat | ttgcaagcat180 |
| gtctgaaact | ttatttgtgg | tatttcttgt | aaatgcctat | gttaaagaaa | cacagaactt240 |
| aagctcaacc | aatcagaagc | agccaacaaa | aacgtaatta | gtaactagga | cttctcatg300 |
| ggatagacca | aataaggcaa | ctgtataact | gtgtaactgt | ataactgtaa | ccaatgaaat360 |
| attatctttg | cttttatcta | tttgtcctaa | aaagcctcct | cctcatgttc | tctctgggga420 |
| gctccctagc | cacttctgga | tcactgctca | aataaactct | taaatatatt | aaaaaaaaaa480 |
| aa | | | | | 482 |

<210> 35
 <211> 641
 <212> DNA
 <213> homo sapiens

<400> 35

| | | | | | |
|------------|------------|------------|------------|------------|----------------|
| gagagcagta | ggtgttagca | gcttggtcgc | gacagggggc | ctaggtagag | cgccggggacc 60 |
| tgtgacaggg | ctggtagcag | cgcagaggaa | aggcggtttt | tagccaggta | tttcagtgtc120 |
| tgtagacaag | atggaatcat | ctccatttaa | tagacggcaa | tggacctcac | tatcattgag180 |
| ggtaacagcc | aaagaacttt | ctcttgtcaa | caagaacaag | tcatcggtca | ttgtggaaat240 |
| attctccaag | taccagaaa | cagctgaaga | aacaaacatg | gagaagaaga | gaagtaacac300 |
| cgaaaatctc | tcccagcact | ttagaaaagg | gaccctgact | gtgttaaaga | agaagtggga360 |

| | | | | | | |
|------------|------------|------------|------------|------------|------------|-----|
| gaaccagg | ctgggagcag | agtctcacac | agactctcta | cggaacagca | gcactgagat | 420 |
| taggcacaga | gcagaccatc | ctcctgctga | agtgacaagc | cacgctgctt | ctggagccaa | 480 |
| agctgaccaa | gaagaacaaa | tccaccccag | atctagactc | aggtcacctc | ctgaagccct | 540 |
| cgttcaggg | cgatatcccc | acatcaagga | cggtgaggat | cttaaagacc | actcaacaga | 600 |
| aagtaaaaa | atggaaaatt | gtctaggaga | atccaggcat | g | | 641 |

<210> 36
 <211> 381
 <212> DNA
 <213> homo sapiens

<400> 36

| | | | | | | |
|------------|-------------|------------|-------------|------------|------------|-----|
| aagttgatga | cctacgctct | tacttctgct | tgccaggagt | aactgaaagc | aaacaccaca | 60 |
| gtctgttggt | tattagcttt | taaaggcttg | tcaacattcc | ttgttaacaa | tttctttttg | 120 |
| ggtagccttt | tataaaatgc | gtaggtgatg | agtgatccag | cagacaaggc | ggctcgagcc | 180 |
| gattcggctc | gagcggctcg | aggtaaaaga | aaaaaaaaatg | tggaggaaaa | catggcctac | 240 |
| tcagctttga | tggaaagtggc | tggttactgc | ttaatagaga | gaatgctttg | gaatcctatg | 300 |
| ttgaaaataa | aaagtgtttg | gttgtgcagt | tatgcggtca | tggtcattcc | cagacagttg | 360 |
| gctaaggttt | agtggctctc | t | | | | 381 |

<210> 37
 <211> 1539
 <212> DNA
 <213> homo sapiens

<400> 37

| | | | | | | |
|-------------|-------------|------------|-------------|-------------|-------------|------|
| ctggggacag | gaagcccctg | taccattatg | gtcggggcat | gaatcccgct | gacaaaccag | 60 |
| cctgggcccg | agaggtaaaa | gagagaacaa | ggatgaacaa | gcagcagaac | tctcccttgg | 120 |
| ccaagagcaa | gccaggcagc | acggggcctg | agccccccag | cccccaggcc | tccccagggc | 180 |
| ccccaggcct | cccctggggc | cccaaaccct | accacaaatt | catggccttc | aagtcctttg | 240 |
| ccgacctccc | ccaccgccct | ctgctggctc | acctgacagt | agaggagggg | cagcggctca | 300 |
| aggtcattcta | tggctccagt | gctggcttcc | atgctgtgga | tgtcgactcg | gggaacagct | 360 |
| atgacattcta | catccctgtg | cacatccaga | gccagatcac | gccccatgcc | atcatcttcc | 420 |
| tccccaacac | cgacggcatg | gagatgctgc | tgtgtctacga | ggacgagggt | gtctacgtca | 480 |
| acacgtacgg | gcgcatcatt | aaggatgtgg | tgctgcagtg | gggggagatg | cctacttctg | 540 |
| tggcctacat | ctgctccaac | cagataatgg | gctgggggtga | gaaagccatt | gagatccgct | 600 |
| ctgtggagag | gggccacctc | gacggggctc | tcattgcacaa | acgagctcag | aggctcaagt | 660 |
| tctgtgtgga | gcggaatgac | aagggtgttt | ttgcctcagt | ccgctctggg | ggcagcagcc | 720 |
| aagtttactt | catgactctg | aaccgtaact | gcattcatgaa | ctggtgacgg | ggccctgggc | 780 |
| tggggctgtc | ccacactgga | cccagctctc | cccctgcagc | caggcttccc | gggccgcccc | 840 |
| tctttccctc | ccctgggctt | ttgcttttac | tgggttgatt | tcactggagc | ctgctgggaa | 900 |
| cgtgacctct | gacccctgat | gctttcgtga | tcacgtgacc | atcctcttcc | ccaacatgtc | 960 |
| ctcttcccaa | aactgtgcct | gtccccagct | tctggggagg | gacacagctt | ccccttccca | 1020 |
| ggaattgagt | gggcctagcc | cctccccctc | tttctccatt | tgagaggaga | gtgcttgggg | 1080 |
| cttgaacccc | ttaccctact | gctgctgact | gggcaggggc | ctggaccctc | ttatttgcac | 1140 |
| gtcaggggag | ccggctcccc | ccttgaatgt | accagaccct | gggggggggtc | actgggccct | 1200 |
| agatttttgg | ggggtcacca | gccactccag | gggcaggggac | catttcttca | ttttctgaaa | 1260 |
| gcactttaat | gattccccctg | cccccaaact | ccagggaatg | gagggggggag | cccgccagcc | 1320 |
| aaaacatgcc | ccccattccg | gacccccctc | tctctttcta | gccccatgcc | ttccccgggtg | 1380 |
| gagggaggga | gcagggagcc | ctcactctcc | acgccccctg | cttgcatccg | catatagtgt | 1440 |
| gagcagcaag | taacccttct | cctccttccc | cagtcacccc | tcctcaatgt | agtggccttg | 1500 |
| aattgtcttt | attaacaaac | aggatatcca | aggctcgagc | | | 1539 |

<210> 38
 <211> 2195
 <212> DNA
 <213> homo sapiens

<400> 38

| | | | | | | |
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| gctccgagga | aggcctgtgg | gagtctcgga | gacgtgtctg | tctgtgaggc | gctgggtgca | 60 |
|------------|------------|------------|------------|------------|------------|----|

| | | | | | |
|------------|------------|------------|------------|------------|-----------------|
| ccacaccagg | tcggtctgtt | tctcacatgt | agggagagag | gggagaccaa | cccctttgtg1200 |
| tcttttgaaa | tacgaagaaa | aatgtgtgtt | caggagcatg | actccagtgc | tgcgctctttg1260 |
| ggcctagttc | agtctgtctt | gtctcaaadc | taggcatttt | tgcttcaatt | ttattttttt1320 |
| taaaacattt | ttttgggtgt | cccgttggtg | ttggaataat | ttgggtaaca | ttggtaaaaag1380 |
| gtaaggggtg | taaaatataa | ggtaattttt | | | 1409 |

<210> 40
 <211> 1084
 <212> DNA
 <213> homo sapiens

<400> 40

| | | | | | |
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| ggaatcttta | agcaatcata | cggggaaaaa | gggcccata | ccttcaaagg | agccacaatt 60 |
| agactcctca | acagacatga | ttgaggctgg | aagataaggg | aatggatatc | tcttcaaagc 120 |
| cgaaagaata | ggaccacacc | tgccaggatt | tggttggtta | aatataaatc | tgatcacccc 180 |
| cctgcttaga | acccttctgc | tttctattac | ccctcattta | aaatgtaaac | tcttcacctt 240 |
| ggtttatgag | aactggttct | tgccctcccc | ttgaacctca | ttaaagtgtg | atttcttgct 300 |
| aaagctccagc | ccgagtgggc | tcctctcagc | ttctaatttt | gtgctctttc | ctgccctttt 360 |
| cctgggcctt | ctcagctctc | cacccccacc | actcttgact | caggtgggtg | ccttcttcct 420 |
| caagtcttga | caattcccgg | gcccttcagt | ccctgagcag | tctacttctg | tgtctgtcac 480 |
| cacatcttgt | cttttcccc | cattgcattt | attgcagttt | atatatatgc | tacttttact 540 |
| tgttcatttc | tgtctcccc | accaggctgt | aaatgagggc | agaaaccttg | tttgttttat 600 |
| tcaccatcat | gtaccaagtg | cttggcacat | agtgggcctt | cattaaatgt | ttgttgaata 660 |
| aaagagggaa | gaaggcaagc | caaccttagc | tacaatccta | ccttttgata | aaatgttcct 720 |
| tttgacaata | tacacggatt | attatttgta | ctttgttttt | ccatgtgttt | tgcttttatc 780 |
| caactggcatt | tttagctcct | tgaagacata | tcatgtgtga | gataacttcc | ttcacatctc 840 |
| ccatgggtccc | tagcaaaatg | ctaggcctgt | agtagtcaag | gtgctcaata | aatatttgtt 900 |
| tgggtgggtt | gtgagccttg | ctgccaagtc | tgccttttgg | gtcgacatag | tatggaagta 960 |
| tttgagagag | agaacctttc | cactcccact | gccaggattt | tgtattgcca | tcgggtgccal1020 |
| aataaatgct | catattttatt | aaacaaaaaa | aaaaaaaaaa | aaaaaaaaaa | aaaaaaaaaa1080 |
| aaaa | | | | | 1084 |

<210> 41
 <211> 2860
 <212> DNA
 <213> homo sapiens

<400> 41

| | | | | | |
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| agaatgtttc | tggatctacc | gatggctctg | ttgacagcgc | tggcactggg | gacctctctg 120 |
| acggttacca | gggcccgtcc | tttgaaccgg | taggtactcg | gccccgagtg | gactccatga 180 |
| gctctgtgga | ggaggatgac | tacgacacat | tgaccgacat | cgattccgac | aagaatgtca 240 |
| ttcgcaccaa | gcaataacct | tatgtggctg | acctggcacg | gaaggacaag | cgtgttctgc 300 |
| ggaaaaagta | ccagatctac | ttctggaaca | ttgccaccat | tgctgtcttc | tatgcccttc 360 |
| ctgtgggtgca | gctgggtgat | acctaccaga | cgggtggtgaa | tgtcacaggg | aatcaggaca 420 |
| tctgtacta | caacttcttc | tgcccccacc | cactggggcaa | tctcagcgcc | ttcaacaaca 480 |
| tcctcagcaa | cctgggggtac | atcctgctgg | ggctgctttt | cctgctcatc | atcctgcaac 540 |
| gggagatcaa | ccacaaccgg | gcctgctgct | gcaatgacct | ctgtgccctg | gaatgtggga 600 |
| tcctccaaaca | ctttgggctt | ttctacgcca | tgggcacagc | cctgatgatg | gaggggctgc 660 |
| tcagtgtctg | cgatcatgtg | tgccccaact | ataccaattt | ccagtgtgac | acatcggtca 720 |
| tgtacatgat | cgccgggactc | tgcattgtga | agctctacca | gaagcggcac | ccggacatca 780 |
| acgccagcgc | ctacagtgcc | tacgcctgcc | tggccattgt | catcttcttc | tctgtgctgg 840 |
| gcgtgggtctt | tggcaaaggg | aacacggcgt | tctggatcgt | cttctccatc | attcacatca 900 |
| tcgcaccctt | gctcctcagc | acgcagctct | attacatggg | ccggtggaaa | ctggactcgg 960 |
| ggatcttccg | ccgcatcctc | cacgtgctct | acacagactg | catccggcag | tgacggggc1020 |
| cgtctctacgt | ggaccgcatg | gtgctgctgg | tcatgggcaa | cgtcatcaac | tggtcgctgg1080 |
| ctgcctatgg | gcttatcatg | cgccccaatg | atttcgcttc | ctacttggtg | gccattggcal1140 |
| tctgcaacct | gctcctttac | ttcgcttctt | acatcatcat | gaagctccgg | agtggggaga1200 |
| ggatcaagct | catccccctg | ctctgcatcg | tttgcaacct | cgtgggtctg | ggcttcgcgc1260 |
| tcttcttctt | cttccaggga | ctcagcacct | ggcagaaaac | ccctgcagag | tcgagggagc1320 |
| acaaccggga | ctgcatcctc | ctcgacttct | ttgacgacca | cgacatctgg | cacttctctt1380 |

GenBank accession number: U00180.1 (Homo sapiens genome, chromosome 1, p11.2)

| | | | | | |
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| cctccatcgc | catgttcggg | tccttcctgg | tgttgctgac | actggatgac | gacctggata1440 |
| ctgtgcagcg | ggacaagatc | tatgtcttct | agcaggagct | gggcccttcg | cttcacctca1500 |
| agggggccctg | agctcctttg | tgtcatagac | cggtcactct | gtcgtgctgt | ggggatgagt1560 |
| cccagcaccg | ctgcccagca | ctggatggca | gcaggacagc | caggtctagc | ttaggcttgg1620 |
| cctgggacag | ccatgggggtg | gcatggaacc | ttgcagctgc | cctctgccga | ggagcaggcc1680 |
| tgtccctctg | ggacccccag | atgttgggca | aattgctgct | ttcttctcag | tgttggggcc1740 |
| ttccatgggc | ccctgtcctt | tggctctcca | tttgtccctt | tgcaagagga | aggatggaag1800 |
| ggacaccctc | cccatttcat | gccttgcatt | ttgcccgtcc | tcctccccac | aatgccccag1860 |
| cctgggacct | aaggcctctt | tttctctcca | tactcccact | ccagggccta | gtctggggcc1920 |
| tgaatctctg | tcctgtatca | gggccccagt | tctctttggg | ctgtccctgg | ctgccatcac1980 |
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| tgccagactt | ttggtgctaa | ggcctgcaag | gggcctgggg | cagtgcgtat | tctcttccct2100 |
| ctgacctgtg | ctcagggtcg | gctcttttagc | aatgcgctca | gcccattttg | agaaccgcct2160 |
| tctgattcaa | gaggctgaat | tcagaggctc | cctcttcata | ccatcagctc | ccagactgat2220 |
| gccagcacca | ggactggagg | gagaagcgcc | tcaccccttc | ccttccctct | ttccaggccc2280 |
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| ccagtccctag | cctcgtctca | ggacccaggg | ctggcttcta | agtttccgtc | cagtcttcag2520 |
| gcaagttctg | tgttagtcat | gcacacacat | acctatgaaa | ccttgaggtt | tacaaagaat2580 |
| tgccccagct | ctgggcaccc | tggccacctt | ggctcttggg | tcccttcgt | cccacctggg2640 |
| ccaccccaga | tgttgaggat | gggggagctc | agggggggcc | tctgctttgg | ggatgggaat2700 |
| gtgtttttct | cccaaacttg | tttttatagc | tctgcttgaa | gggctgggag | atgaggtggg2760 |
| tctggatctt | ttctcagagc | gtctccatgc | tatggttgca | tttccgtttt | ctatgaatga2820 |
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<210> 42
<211> 2137
<212> DNA
<213> homo sapiens

<400> 42

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| cgctccgggtc | tgtgggtgcag | ccgggaccca | ggaccatgtc | tctgtctcgc | tcagaggaga | 120 |
| tgcaccgggt | cacggaaaat | gtctataaga | ccatcatgga | gcagttcaac | cctagcctcc | 180 |
| ggaacttcat | cgccatgggg | aagaattacg | agaaggcact | ggcagggtgtg | acgtatgcag | 240 |
| ccaaaggcta | ctttgacgcc | ctggtgaaga | tgggggagct | ggccagcgag | agccagggtc | 300 |
| ccaaagaact | cggagacgtt | ctcttccaga | tggctgaagt | ccacaggcag | atccagaatc | 360 |
| agctggaaga | aatgctgaag | tcttttcaca | acgagctgct | tacgcagctg | gagcagaagg | 420 |
| tggagctgga | ctccagggtat | ctgagtgtctg | cgctgaagaa | ataccagact | gagcaaagga | 480 |
| gcaaaggcga | cgccctggac | aagtgtcagg | ctgagctgaa | gaagcttcgg | aagaagagcc | 540 |
| agggcagcaa | gaatcctcag | aagtactcgg | acaaggagct | gcagtacatc | gacgccatca | 600 |
| gcaacaagca | gggcgagctg | gagaattacg | tgtccgacgg | ctacaagacc | gactgacag | 660 |
| aggagcgcag | gcgcttctgc | ttcctgggtg | agaagcagtg | cgccgtggcc | aagaactccg | 720 |
| cggcctacca | ctccaagggc | aaggagctgc | tggcgcagaa | gctgccgctg | tggcaacagg | 780 |
| cctgtgccga | ccccagcaag | atcccggagc | gcgcggtgca | gctcatgcag | caggtggcca | 840 |
| gcaacggcgc | cacctcccc | agcgccctgt | cggcctocaa | gtccaacctg | gtcatttccg | 900 |
| accccatctc | gggggccaag | cccctgccgg | tgccccccga | gctggcaccg | ttcgtggggc | 960 |
| ggatgtctgc | ccaggagagc | acacccatca | tgaacggcgt | cacaggcccc | gatggcgagg | 1020 |
| actacagccc | gtgggctgac | cgcaaggctg | cccagcccaa | atccctgtct | cctccgcagt | 1080 |
| ctcagagcaa | gctcagcgac | tcctactcca | acacactccc | cgtgcgcaag | agcgtgaccc | 1140 |
| caaaaaacag | ctatgccacc | accgagaaca | agactctgcc | tcgctcgagc | tccatggcag | 1200 |
| ccggcctgga | gcgcaatggc | cgtatgcggg | tgaaggccat | cttctccccc | gctgctgggg | 1260 |
| acaacagcac | cctcctgagc | ttcaaggagg | gtgacctcat | taccctgctg | gtgctgagg | 1320 |
| cccgcgatgg | ctggcactac | ggagagagtg | agaagaccaa | gatgcggggc | tggtttccct | 1380 |
| tctcctacac | ccgggtcttg | gacagcgatg | gcagtgacag | gctgcacatg | agcctgcagc | 1440 |
| aagggaagag | cagcagcacg | ggcaacctcc | tggacaagga | cgacctggcc | atcccccccc | 1500 |
| ccgattacgg | cgccgcctcc | cgggccttcc | ccgcccagac | ggccagcggc | ttcaagcaga | 1560 |
| ggccctacag | tgtggccgtg | cccgccttct | cccaggccct | ggatgactat | ggagcgcggg | 1620 |
| ccatgagcag | cgccgatgtg | gaagtggcca | gattctgagc | cgctgacta | gagttagaat | 1680 |
| ccctttgccc | acgtccagct | gaagccgaca | gtgaccaacg | acaggctctg | ccccctcctc | 1740 |
| agctgatggc | cacatctgca | gtgctgccc | tctggtggct | tccccgcgcc | ttcccatgta | 1800 |

| | | | | | |
|-------------|-------------|-------------|------------|------------|----------------|
| gcctgttctg | tcattcatctg | tgcgttccctg | tgtagagaac | atccaggccc | cggctgcctg1860 |
| gtctttgcccc | acttgagtct | ggcctggact | ggatcccagc | tgttctaggg | agggccgggc1920 |
| agagtggggc | gcaggccct | gaaggcgag | acccagtggc | tgggctgccc | agggctgagg1980 |
| ggccgcctct | tgagggtaca | cgctctgggt | cacatggcca | tggagccttg | ggtagccctg2040 |
| agttaagga | ggacatttg | ccagctgggt | gctgggagg | gagcctggct | gccctgctgc2100 |
| ttctctgccc | taataaacag | gcttctcctg | caaaaaa | | 2137 |

<210> 43
 <211> 2410
 <212> DNA
 <213> homo sapiens

<400> 43

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| tgcaacgttg | tggcaacaat | aaaatttttga | cgtagccatc | ctccatttgg | aagtctggtg | 120 |
| gctggttttg | cgtggaaatg | accctgtttt | tatttccaga | attacctctg | ggttttagaga | 180 |
| agtgggtttt | aaacgagtgt | gggtaaaaaa | aattacctga | ggtacttgtc | agagtgcag | 240 |
| acttctaggt | cccacccagc | tctcatcaat | cagtttagtg | aggtggtgc | ccaggactct | 300 |
| gatttttaaac | atacccctag | aaagattctg | atacaggtag | aggtgagaag | ccctggttta | 360 |
| gaggcagctc | ggcctccctt | catgggtggga | ccaggggccag | cagggaatgt | caggggccacc | 420 |
| cctgaccttc | actgtgactt | ctggccttgca | gaggggtggcc | cgggaggaga | tgggtggagg | 480 |
| agctcaacag | cgggaagggtg | atgtacgcct | tctgcagagt | gaaggacccc | aactctggac | 540 |
| tgcccaaatt | tgtcctcatc | aactggacag | gcgagggcgt | gaacgatgtg | cgggaaggag | 600 |
| cctgtgccag | ccacgtcagc | accatggcca | gcttcctgaa | gggggcccct | gtgaccatca | 660 |
| acgcacgggc | cgaggaggat | gtggagcctg | agtgcacat | ggagaagggtg | gccaaggcct | 720 |
| caggtgccaa | ctacagcttt | cacaaggaga | gtggccgctt | ccaggacgtg | ggaccccagg | 780 |
| ccccagtggg | ctctgtgtac | cagaagacca | atgccgtgtc | tgagattaaa | agggttggtg | 840 |
| aagacagctt | ctgggccaac | gcagagaagg | aggaggagaa | ccgtcggctg | gaggaaaagc | 900 |
| ggcgggcccga | ggaggcacag | cggcagtggg | gcaggagcgc | cgggagcgtg | agtgcgtgag | 960 |
| gctgcacgcc | gggagcagcg | ctatcaggag | cagggtggcg | aggccagccc | ccagaggacg | 1020 |
| tgggagcagc | agcaagaagt | ggtttcaagg | aaccgaaatg | agcaggagtc | tgccgtgcac | 1080 |
| ccgaggggaga | ttttcaagca | gaaggagagg | gccatgtcca | ccacctccat | ctccagtcct | 1140 |
| cagcctggca | agctgaggag | ccccttcctg | cagaagcagc | tcacccaacc | agagaccac | 1200 |
| tttggcagag | agccagctgc | tgccatctca | aggcccaggg | cagatctccc | tgctgaggag | 1260 |
| ccggcgcccc | gcactcctcc | atgtctggtg | caggcagaag | aggaggctgt | gtatgaggaa | 1320 |
| cctccagagc | aggagacctt | ctacgagcag | ccccacttgg | tgcagcagca | aggtgctggc | 1380 |
| tctgagcaca | ttgaccacca | cattcagggc | caggggctca | gtgggcaagg | gctctgtgcc | 1440 |
| cgtgccctgt | acgactacca | ggcagccgac | gacacagaga | tctcctttga | ccccgagaac | 1500 |
| ctcatcacgg | gcacgcaggt | gatcgacgaa | ggctggtggc | gtggctatgg | gccggatggc | 1560 |
| catttttgga | tgttccctgc | caactacgtg | gagctcattg | agtgaggctg | agggcacatc | 1620 |
| ttgcccttcc | cctctcagac | atggcttcc | tattgctgga | agaggaggcc | tgggagttga | 1680 |
| cattcagcac | tcttccagga | ataggacccc | cagtgaggat | gaggcctcag | ggctccctcc | 1740 |
| ggcttggcag | actcagcctg | tcaccccaaa | tgcagcaatg | gcctggtgat | tcccacacat | 1800 |
| ccttctctgca | tcccccgacc | ctcccagaca | gcttggtctt | tgcccctgac | aggatactga | 1860 |
| gccaagccct | gcctgtggcc | aagccctgag | tggccactgc | caagctgcgg | ggaagggctc | 1920 |
| tgagcagggg | catctgggag | gctctggctg | ccttctgcat | ttatttgctt | ttttcttttt | 1980 |
| tctcttgctt | ctaaggggtg | gtggccacca | ctgttttagaa | tgacccttgg | gaacagtga | 2040 |
| cgtagagaat | tgttttttagc | agagtgtgtg | accaaagtca | gagtggatca | tgggtggttt | 2100 |
| gcagcagggg | atttgtcttg | ttggagcctg | ctctgtgtct | cccactccat | ttctctgtcc | 2160 |
| ctctgcctgg | gctatgggaa | gtggggatgc | agatggccaa | gctcccaccc | tgggtattca | 2220 |
| aaaacggcag | acacaacatg | ttcctccacg | cggctcactc | gatgcctgca | ggccccagtg | 2280 |
| tgtgcctcaa | ctgattctga | cttcaggaaa | agtaacacag | agtggccttg | gcctgtgtgc | 2340 |
| ttccctctatt | ttctgtccca | gctcatccgt | gtctctgaag | aacaaatatg | cttttgacc | 2400 |
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<210> 44
 <211> 2333
 <212> DNA
 <213> homo sapiens

<400> 44


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cgatgttgcg catgaagagg gagcaggtct tatgcagcgg ccgcggttg cactccagcc1560
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<210> 46
 <211> 1106
 <212> DNA
 <213> homo sapiens

<400> 46

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acttacggga tatttcgtca cagaagacac aaagacacat ccagcgggga ccacctcacc 180
tgcagattag accccaagc caaagacctg aaggatggga ccaggagga ggccacaaaa 240
aggcaagaag cccctgtgga tccccgccc gaaggagatc cgcagaggac agtcatcagc 300
tggaggggag cgggtgatcg gcctgagcag ggcaccgagc tcccttcaag aagagcagaa 360
gtgcccacca agcctcccc gccaccggcc aggacacagg gcacaccagt gcatctgaac 420
tatcgccaga agggcgatg tgacgtcttc ctgcatgcat ggaaaggata ccgcaagttt 480
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ctgtttgaga gcacgatccg catcctgggg gggctcctga gtgcctacca cctgtctggg 720
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cgggtggacct ccgacagcac tgtggccgag gtgaccagca ttcagctgga gttccgggag 900
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<210> 47
 <211> 1370
 <212> DNA
 <213> homo sapiens

<400> 47

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tctggggtcg gcgcgtctgg cggctccgga tccatgcgac ccgcagcgat ggtgccaccg 180
cgtcatcaac aacctcctct actaccaaac caactacct ctctgcttcg gcatcggcct 240
cgctctcgcc gggtagctgc ggccacttca tacgtcctg agcgcgctgg tagtggcggt 300
ggccctcgcc gtgctggtgt gggcagctga gaccgcgca ctgtgcgccg ctgccgccgc 360
agccaccctg cagcctgcct ggccgcagtg cttgccgtcg gcctcctggt gctctgggtc 420
gcggggcgcg cttgcacctt cctgttcagc atcgccgggg cggtgcttct gatectggtg 480
cacgcctcgt tgcgcctgcg caaccttaag aacaagattg agaacaagat cgagagcatt 540
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```

| | | | | | | |
|------------|------------|------------|------------|------------|------------|------|
| accctacctt | ccaacccagg | tcaagacatt | gccaaatctt | gaactcagaa | cccaagtgtt | 1080 |
| ccatgcccct | gtgtggatgg | agtcgggtat | cctgactgtt | ggacccctgg | tccaggtgat | 1140 |
| cccgaccctc | accagtccca | tttgctctcc | tccagctctg | cttaggcatt | ttgcccctca | 1200 |
| ccccaatggt | ccacaccatc | gacaaccaag | gggtgaggtg | gggacaggcc | tcagcagggg | 1260 |
| atggggcgta | tatgttagtg | ttgctgcaac | aataaagcct | gttgcatctc | tcatgccaaa | 1320 |
| aaaaaaaaaa | aagtcgaccg | gccgcaaata | tagtagtagt | agtcgtccgc | | 1370 |

<210> 48
 <211> 617
 <212> DNA
 <213> homo sapiens

<400> 48

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| taatggttct | ggagagaatc | ttactggcag | accatcaagg | ttgatttaca | ggtagaacat | 120 |
| ccataccagt | tcctactaaa | atatgcaaag | caactcaaag | gtgataaaaa | caaaattcaal | 180 |
| aagttgggtc | aaatggcatg | gacatttgta | aatgacagtc | tctgcaccac | cttgtcactg | 240 |
| cagtgggaac | cagagatcat | agcagtagca | gtgatgtatc | tcgcaggacg | tttgtgcaaaa | 300 |
| tttgaatatac | aagaatggac | ctccaaaccc | atgtatagga | gatgggtggga | gcagtttgtt | 360 |
| caagatgtcc | cggctcgacg | tttgggaagac | atctgccacc | aaatcctgga | tctttactca | 420 |
| caaggaaaac | aacagatgcc | tcatacacacc | ccccatcagc | tgcaacagcc | cccattctct | 480 |
| gagcctccca | ccccgtgcc | tgggccctgt | ggttgctggg | cctcccacct | caaggagggg | 540 |
| aaggttgtac | agcccgaacc | cgtggagcaa | tgccctgtct | ggcctccaaa | acaaaaataa | 600 |
| aactgggtca | ctttaaa | | | | | 617 |

<210> 49
 <211> 1899
 <212> DNA
 <213> homo sapiens

<400> 49

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| ttacagcctt | tcgattatga | tcccaatgag | aaaagtaaac | acaggttatg | gttcagtcta | 120 |
| tgtttgctcc | aactgacact | tcagatatgg | aagcagtatg | gaaggaggca | aaaccggaag | 180 |
| accttatgga | ttcaaaaact | agatgtgtgt | ttgaattgcc | agcagagaa | gataaaccac | 240 |
| atgatgtaga | aataaataaa | attatatcca | caactgcac | aaagacagaa | acaccaatag | 300 |
| tgtctaagtc | tctgagttct | tctttggatg | acaccgaagt | taagaagggt | atggaagaat | 360 |
| gtaagaggct | gcaagggtgaa | gttcagaggc | tacgggagga | gaacaagcag | ttcaagggaag | 420 |
| aagatggact | gcggatgagg | aagacagtgc | agagcaacag | ccccatttca | gcattagccc | 480 |
| caactgggaa | ggaagaaggc | cttagcaccc | ggctcttgge | tctgggtggt | ttgttcttta | 540 |
| tcgttggtgt | aattattggg | aagattgcct | tgtagaggta | gcatgcacag | gatggtaaat | 600 |
| tggattgggt | gatccaccat | atcatgggat | ttaaatttat | cataaccatg | tgtaaaaaga | 660 |
| aattaatgta | tgatgacatc | tcacagggtc | tgccctttaa | ttacccctcc | ctgcacacac | 720 |
| atacacagat | acacacacac | aaatataatg | taacgatctt | ttagaaagtt | aaaaatgtat | 780 |
| agtaactgat | tgagggggaa | aagaatgatc | tttattaatg | acaagggaaa | ccatgagtaa | 840 |
| tgccacaatg | gcataattgta | aatgtcattt | taaacattgg | taggccttgg | tacatgatgc | 900 |
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| tatttcagaga | tgtttaatgc | atatttaact | tattttaatg | atttcatctc | atgttttctt | 1320 |
| attgtcacaa | gagtcacgtt | aatgctgcgt | gctgctgaac | tctgttgggt | gaactggtat | 1380 |
| tgtctgtgga | gggctgtggg | ctcctctgtc | tctggagagt | ctgggtcatgt | ggagggtggg | 1440 |
| tttattggga | tgtctggagaa | gagctgccag | gaagtgtttt | ttctgggtca | gtaaataaca | 1500 |
| actgtcatag | ggaggggaaat | tctcagtagt | gacagtcaac | tctaggttac | cttttttaaat | 1560 |
| gaagagtagt | cagtcttcta | gattgttctt | ataccacctc | tcaaccatta | ctcacacttc | 1620 |
| cagcgcccag | gtccaagtct | gagcctgacc | tccccttggg | gacctagcct | ggagtcagga | 1680 |
| caaatggatc | gggctgcaga | gggttagaag | cgagggcacc | agcagttgtg | ggtggggagc | 1740 |
| aagggaagag | agaaactctt | cagcgaatcc | ttctagtact | agttgagagt | ttgactgtga | 1800 |

| | | | | | | |
|------------|------------|------------|------------|------------|------------|------|
| attaatttta | tgccataaaa | gaccaaccca | gttctgtttg | actatgtagc | atcttgaaaa | 1860 |
| gaaaaattat | aataaagccc | caaaattaag | aaataaaaa | | | 1899 |

<210> 50
 <211> 1398
 <212> DNA
 <213> homo sapiens

<400> 50

| | | | | | | |
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| agaatgtcgg | gcggtgctgc | gaggcccaag | cccgggccgg | ggccgcctcc | ctcaacgcct | 60 |
| cccttgacgg | cctccacaac | gcactcttcg | ccactcagcg | cagcttgagg | cagcaccagc | 120 |
| ggctcttcca | cagcctcttt | gggaacttcc | aagggtcat | ggaagccaac | gtcagcctgg | 180 |
| acctggggaa | gctgcagacc | atgctgagca | ggaaagggaa | gaagcagcag | aaagacctgg | 240 |
| aagctccccg | gaagagggac | aagaaggaag | cggagccttt | ggtggacata | cgggtcacag | 300 |
| ggcctgtgcc | aggtgccttg | ggcgcggcgc | tctgggaggc | aggatcccct | gtggccttct | 360 |
| atgccagctt | ttcagaaggg | acggctgccc | tgcagacagt | gaagttcaac | accacataca | 420 |
| tcaacattgg | cagcagctac | ttccctgaac | atggctactt | ccgagcccct | gagcgtgggtg | 480 |
| tctacctgtt | tgcagtgagc | gttgaatttg | gcccagggcc | aggcaccggg | cagctgggtgt | 540 |
| ttggagggtc | ccatcggaact | ccagtctgta | ccactgggca | ggggagtggg | agcacagcaa | 600 |
| cggctctttg | catggctgag | ctgcagaagg | gtgagcaggt | atggtttgag | ttaacccagg | 660 |
| gatcaataac | aaagagaagc | ctgtcgggca | ctgcatttgg | gggcttccctg | atgtttaaga | 720 |
| cctgaacccc | agccccaatc | tgatcagaca | tcatggactc | gcccagctct | cctcggcctg | 780 |
| gggctctggc | caaggatggg | ctggagggtc | ttcagttggg | ctgtctcttc | cctggaaacc | 840 |
| ttctgcaaag | atgggtgtgg | gtacgtgggt | tccctgtaac | cacatggggc | ttggccattt | 900 |
| ctccatgatg | agaaggactg | gaatgcttct | ccgggcagga | catgggtccta | ggaagcctga | 960 |
| accttggtct | ggcatgcctt | ctcagacagc | acggcctggg | ctccaactct | tcaccacacc | 1020 |
| ctgtattcta | caacttcttt | gggtgtttgc | tcctcctgtg | gttggaact | tctgtacaac | 1080 |
| actttaaact | tttctcttgc | ttcctcttct | cttctccctt | atcgtagat | agaaagacat | 1140 |
| tcttccccag | gaggaatggt | taaaatggag | gcâacatttt | ggccaacatt | ggaaagcact | 1200 |
| agagggcaat | gggattaaac | caacctgctt | ggtctctatt | agtcagtaat | gaagacgaca | 1260 |
| gcctggccaa | ccaagggaaa | ggaaattagt | atcttttagt | tcagtcattc | cttgtagggg | 1320 |
| tatgggtttt | agcttgtggc | ccccaccgaa | aagattcatc | ttggattgtt | aatgcctatt | 1380 |
| attccccaca | ttaagggg | | | | | 1398 |

<210> 51
 <211> 1340
 <212> DNA
 <213> homo sapiens

<400> 51

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| tttggcatca | tttacaattt | catagaatta | ctgtgaaggc | ctttctagtt | gagatgttgg | 60 |
| ggatatttgg | attctaattg | ttaaccccag | aagaaggtaa | tttagcttgt | atttatttaa | 120 |
| aaccatttta | gccttttact | tatatctggg | agaattccag | tgatcatcct | aataaggtat | 180 |
| atttcagaat | aatttttttt | tccttcagaa | taacttagaa | tcagatgcta | taagggtctc | 240 |
| taggagcagt | gtgaaatttc | cgtaaagata | aatttgaatg | ttgtaaccaa | gtttatatta | 300 |
| aaccaagagg | ccatttccaa | tatgattttt | tgtttctttt | taacttggtt | agtccctaag | 360 |
| agattacatg | ctagggcttg | agtcatttct | attgtagata | atgatggccc | acacagtcac | 420 |
| cttcaactat | ccacataagc | taggctttcc | gcttttgcca | cggacagtgt | gaccaagata | 480 |
| tttccagagt | aaataaccca | ccacaacctt | ggtaattcct | cttttcttct | taagctccag | 540 |
| gaagcgaaag | cagaaggact | cttttcagac | tgccctctgt | agcctacatt | gcagctttcc | 600 |
| aaaacaggca | gctagcactg | ggaaagccca | tgtggtgacc | ccatattttt | ctgaggttct | 660 |
| tcttttccat | ggtgttactt | tattatcaga | aagtaaattc | agaaaacagg | tcttgccctt | 720 |
| agcagacaag | aaccacacca | gtttcttgta | aaggtaacgg | atacattggg | attcaggagt | 780 |
| gacacagagg | tccagcccca | gaacttgtaa | ggattttgtt | tgaacactga | gcagatgcct | 840 |
| cctccctgcc | ccccatcaca | ctagttaggg | gtggccatga | attctatgcc | agagtcactc | 900 |
| ctgcagctct | ctaggggatg | gccttcttat | cccactctcg | cacacatccc | agtctagtct | 960 |
| ttgccttcac | agagtcctcc | ttgacacccc | tgacttaatg | atagttgctg | ttttggagta | 1020 |
| gaattgatca | ggtttaagtc | atcctgctca | ggttgggcat | agtgggtcat | gcctgtaatc | 1080 |
| tcagcacttt | gggaagccaa | agtgggagga | ttgcttgagc | ccaggagttc | caaaccatcc | 1140 |
| tgggcaacag | agggagaccc | tgtctctacc | aagaaaaaaa | aaaaaaaaaa | aaagttaaaa | 1200 |
| aaacaattag | ctggacctgg | tggtgcacac | tcagtaggct | gaggtgaaag | gattccttta | 1260 |

acatgggaga ctgaagatgc agtgagccat gaatcagcaa ctgcacacca gtatgagaga1320
aaaagtggaa ccctatcaca 1340

<210> 52
<211> 315
<212> DNA
<213> homo sapiens

<400> 52

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cgggcgagac tcacatcttg gaaattcaaa tactcaatag ctctcgaatt ctaggaatct180
tgagaagagg cctggattaa ggattcagac gtggggcctc agatggctat ggcattgctg240
gttctaccaa cgtgacaggt gatcaagtta agaagctgga cgtcctctcc aacgacctgg300
gtatggaaca ggtta 315

<210> 53
<211> 1162
<212> DNA
<213> homo sapiens

<400> 53

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tggaactgga atgggcccag gagatggatt tgattctcgt ggcaaactgt aatttgatag 120
gcatagtggg agtgatagat ctggcctgaa gcacgaggac aaactgtggg gtagcggatc 180
tcacaactgg ggaactgtca aagacgaatt aacagagtcc cccaaataca ttcagaaaca 240
aatactctat aattacagtg acttggatca atcaaagtgt actgaggaaa cacctgaagg 300
tgaagaacat catccagtgg cagacactga aaataaggag aatgaagttg aagaggtaaa 360
agaggagggt ccaaaagaga tgactttgga tgagtggagg gctattcaaa ataaggaccg 420
ggcaaaagta gaatttaata tccgaaaacc aaatgaagggt gctgatgggc agtggagaa 480
gggatttggt cttcataaat caaagagtga agaggctcat gctgaagatt cggttatgga 540
ccatcatttc cggaagccag caaatgatat aacgtctcag ctggagatca attttgaga 600
ccttgccgc ccaggacgtg gcggcagggg aggacgaggt ggacgtgggc gtggtgggcg 660
cccaaaccgt ggcagcagga ccgacaagtc aagtgtctct gctcctgatg tggatgacc 720
agaggcattc ccagctctgg cttaactgga tgccataaga caaccctggt tcctttgtga 780
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gaacttctcc cgctacacag aagtaacaaa tatggtagtc agttttgtat ttagaaatgt 960
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gtattgctgc ttgcaaatat gcatttccaa acttgaaata taggtgtgaa cagtgtgtac1080
cagttaaaaa aatcacaaaa aaaaaaatt ttaattaagg atttagaagt tcccccaatt1140
acaaactggt tttaaatatt gg 1162

<210> 54
<211> 1826
<212> DNA
<213> homo sapiens

<400> 54

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tcccaaagag cgccctgcgg agcctctcac cctccccca tcctatggcc accagccaca 180
gacagggtct ggggagtcct caggagcctc gggggacaag gaccacctgt acagcagggt 240
atgcaagcct cgggtcccaa agcctgcagc ccggcgggcc cctccattct cctctccag 300
cgggtgtcttg ggtaccgggc tctgtgagct agatcggttg cttcaggaac ttaatgccac 360
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agagcagaag gaggaccagt ctgaagataa gaaaagacc agcctccctt ccagcccgtc 480
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ctcactctct gacttccgcg ttcaaaacca tcttccagcc tctgggcca ctcagccacc 600
gggtggtgagc tccacaaatg agggctcccc atccccacca gagccgactg gcaagggcag 660

| | | | | | | |
|------------|------------|------------|-------------|-------------|-------------|------|
| cctagacacc | atgctggggc | tgtctgagtc | cgacctcagc | cgccgggggtg | ttcccaccca | 720 |
| ggccaaaggc | ctctgtggct | cctgcaataa | acctattgct | gggcaagtgg | tgacggctct | 780 |
| gggcgcgcgc | tggcaccctg | agcacttcgt | ttgctggaggc | tgttccaccg | ccctggggagg | 840 |
| cagcagcttc | ttcgagaagg | atggagcccc | cttctgcccc | gagtgtact | ttgagcgctt | 900 |
| ctcgccaaga | tgtggcttct | gcaaccagcc | catccgacac | aagatgggtga | ccgccttggg | 960 |
| cactcactgg | caccagagc | atttctgctg | cgtcagttgc | ggggagccct | tcggagatga | 1020 |
| gggtttccac | gagcgcgagg | gcccgcctta | ctgccgcggg | gacttccctgc | agctgttcgc | 1080 |
| cccgcgctgc | cagggctgcc | agggcccat | cctggataac | tacatctcgg | cgctcagcgc | 1140 |
| gctctggcac | ccggactggt | tcgtctgcag | ggaatgcttc | gcgcccttc | cgggaggcag | 1200 |
| cttttctcag | cacgaggggc | gcccgttgty | cgagaaccac | ttccacgcac | gagcgcgctc | 1260 |
| gctgtgcgcc | acgtgtggcc | tcctgtgac | cgccgcgtgc | gtgtcgcccc | tgggtcgccg | 1320 |
| cttccaccgc | gaccacttca | catgcacctt | ctgcctgcgc | ccgctcacca | aggggtcctt | 1380 |
| ccaggagcgc | gccggcaagc | cctactgcca | gccctgcttc | ctgaagctct | tcgggtgaca | 1440 |
| gcccgcctcg | ctcgccctct | ccccggagg | ccgcgccctc | ccggaaaagc | cgggtcctcc | 1500 |
| agaccccgag | gccttgctct | cagagcggga | ggccccacc | actggagagc | ccgcgcccta | 1560 |
| aggtactatg | agtcctcagg | ggtcaagttc | agaaacggcc | cagccagacc | taaaccacac | 1620 |
| cgcccacaaa | gtggatttga | cacagacaag | aactcccgtg | cgggcctcca | ctctattccc | 1680 |
| acccttgagg | gagccccctt | actgggggag | ggtccttgca | attccagcga | atcggaggcc | 1740 |
| aggccaggac | gtccttgctc | cctgcacctt | cactgttctg | tgcacttttt | ctacctacat | 1800 |
| aaacacacgc | attccacctc | aaaaaa | | | | 1826 |

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<210> 55
<211> 1114
<212> DNA
<213> homo sapiens
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<400> 55

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| gatgaagtag | atgactttga | ggacttcac | ttcagccact | tctttggaga | caaagcactg | 60 |
| aagaagaggt | caggaagaa | ggacaagcac | tcacagagcc | caagagctgc | ggggcccagg | 120 |
| gaggggcaca | gcatagggg | ctgacaccct | gccccacagg | gaatggcctt | ggcctggccc | 180 |
| agcccaagat | cccagcgta | tctaactcct | ggaggggtga | ctctgtcctg | gcttgtttgg | 240 |
| tgtcctcaga | tatctttcac | acagtagagc | aaaatcacca | gccctgcact | gatgtcactt | 300 |
| tatgtagaaa | aaggccttag | ctggacctgc | gttgccgtct | atgcaaatgc | atgcaaatac | 360 |
| tccaggccct | gggagtgtgg | cttgtgtttt | gtcactgtga | agggggagat | gggagaggag | 420 |
| cctgttttgg | ggtggggtct | ggggaaggca | atctgattct | gaagctaaag | agctttcatc | 480 |
| ctcttgagtg | tatgtcccca | tagtggggcc | cttgaccac | atgctgaccg | gtgccttggg | 540 |
| atttgactag | agttgtctgg | tcgaggccca | gcacgaggac | ttacctggg | gttttgttag | 600 |
| gtttggaagc | agctgtccct | agggggtgaa | gtccccccc | ttttttttt | tttacccttg | 660 |
| cttctccac | ggcttcacct | ccctatgtga | actgtagact | cagatcccaa | taaagtgtctg | 720 |
| ttgcagctat | gatgctaggt | ggtttctaag | cacaggggac | acccacacc | ccctgctga | 780 |
| atggatgggt | ccatcccagg | cactggtact | tgcccccttg | ttctgtatcc | ccctttgccc | 840 |
| ttgccttgcc | cttccaacaa | accctaggcc | cttgagaage | tgatacttct | ccttttgctc | 900 |
| acagctgcct | tggccccacc | cctgggagat | gtagcaaatt | gagtgtgggt | tttgagctc | 960 |
| gagcctcagg | ctcaaatcca | ggccaagtga | tcttgggcaa | gttaatctct | gggaactttg | 1020 |
| ggtttcttat | cttcaaaaaa | ggcgatgga | gggctgggga | agtgattaaa | taaaagcaac | 1080 |
| gcaagaaaaa | aaaaaaaaaa | aaaaaaaaaa | aaaa | | | 1114 |

```
<210> 56
<211> 1644
<212> DNA
<213> homo sapiens
```

<400> 56

| | | | | | | |
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| ctcgagccgt | gcaagtggaa | taacacgggc | tgccaggccc | tgcccagcca | agaacgaagg | 60 |
| ccccagcaag | gccttcgtga | actgtgacga | gaacagccgg | cttgtctccc | tgaccctgaa | 120 |
| cctggtgacc | agggctgatg | agggctggta | ctggtgtgga | gtgaagcagg | gccacttcta | 180 |
| tggaagagact | gcagccgtct | atgtggcagt | tgaagagagg | aaggcagcgg | ggtcccgcga | 240 |
| tgtcagcccta | gcgaaggcag | acgctgctcc | tgatgagaag | gtgctagact | ctggtttttcg | 300 |
| ggagattgag | aacaaagcca | ttcaggatcc | caggcttttt | gcagaggaaa | aggcgggtggc | 360 |
| agatacaaga | gatcaagccg | atgggagcag | agcatctgtg | gattccggca | gctctaggga | 420 |
| acaaggtgga | agctccagag | cqctggcttc | caccctggtg | ccccctgggcc | tggtgctggc | 480 |

caggctctgt atccctcctt ttcctagctg atattctaac tagaagcatt tgtcaagttc2160
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<210> 58

<211> 1510

<212> DNA

<213> homo sapiens

<400> 58

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aggacctcct ggaactggca agacagctct ggctctggct attgctcagg agctgggtag 180
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agttttatgaa ggtgaagtca cagagctaac tccgtgtgag acagagaatc ccatgggagg 360
atatggcaaa accattagcc atgtgatcat aggactcaaa acagccaaag gaaccaaaca 420
gttgaaactg gaccccagca tttttgaaag tttgcagaaa gagcgagtag aagctggaga 480
tgtgatattac attgaagcca acagtggggc cgtgaagagg cagggcaggt gtgataccta 540
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<210> 59

<211> 1188

<212> DNA

<213> homo sapiens

<400> 59

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ggtctgtgag agaccgaata gaggggctgg ggccacgagc gccattgaca agcaatgggg 180
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1188

<210> 60

<211> 2208

<212> DNA

<213> homo sapiens

<400> 60

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<210> 61

<211> 283

<212> DNA

<213> homo sapiens

<400> 61

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<210> 62

<211> 184

<212> DNA

<213> homo sapiens

<400> 62

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<210> 63

<211> 1780

<212> DNA

<213> homo sapiens

<400> 63

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<210> 64

<211> 1652

<212> DNA

<213> homo sapiens

<400> 64

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ttatgtggaa ttacttgaca agtatctcgg cagtgtctgt gaactagata tcatcttta 180
ttttgagaag gcttatttta ttttgatga gtttcttttg ggaggggaag ttcaggaaac 240
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tggtgtaaga tgatgtcttg tcagtattac tgttttgcta agccgcttca ttcattgcta 480
cacaattttt ttttaaaagg gaacttttag taattaagtg ataagggact taaatatgaa 540
```

| | | | | | | |
|-------------|------------|------------|-------------|------------|-------------|------|
| ttagaatggt | gcagaaagag | ataccttttc | tggatatttt | aaagttttaa | ggtcagtttc | 600 |
| tcttaatctg | attatgtgca | catatgaaaa | tggcacatca | tatacatgta | aaatcaggca | 660 |
| gtatacatatt | attaattact | gtatttgaca | aaggaaactc | ttaaattata | atgtgaaacc | 720 |
| tggttttatg | aaaccaaaga | ctagtgcagc | atctcagcat | atgtaaaaag | aaaaaaaaaa | 780 |
| gggaattgac | atgtcacata | tcaaatgaat | ggaaactttg | ttgaaacttt | aaaaagcaaa | 840 |
| tttactccaa | agacttgtat | tggaaattac | ataccttttt | tttttttttt | aaaggactac | 900 |
| agattatttt | taatgactaa | attggagtga | tacttccttac | actaaaaatt | atttccttagg | 960 |
| cattctgaat | ctgggatgag | aaacaggatt | gtttcacaat | agtaagcaca | taatttttaa | 1020 |
| ggccaaggca | catttgactc | ctgagatgaa | ttttttgtgg | tcataatcaa | atacttagtt | 1080 |
| gtttttgatg | ccccaaaata | aagtgagaat | ggtaatttgc | caggaattct | tcataacagt | 1140 |
| atcttacaaa | aaacgtgttg | ctctcttcac | agtattatgt | gtaaagtcac | tgtttaaagc | 1200 |
| acgaatgttc | cctctggggg | actgtttaa | gctaaattta | tttgcttcc | ctccacttag | 1260 |
| aagtgtgca | cactttacag | cagcttcctt | tctttccatg | gcactgccta | gttaacagaa | 1320 |
| gtcttataaa | aatttaaaaa | gacacatttc | ttacaaaaaa | gagttgaatg | aggtaaaatg | 1380 |
| gcattagatg | gctctatatt | ttttaaagct | atgtaattgt | tcagcgtcac | ttttctaagt | 1440 |
| acttatacat | atctaaacat | gtcttcctgg | tttatatttt | cacttatata | tgctgggctg | 1500 |
| gattaagctt | tggtgtgatt | gtgaccaaca | ttcaggccac | gtgagcactg | tcttatcaca | 1560 |
| tcgccaatta | gttgtaataa | acgttcaacg | tacaaaaaaa | aaaaagggcg | cagcttcctt | 1620 |
| ggggggaatt | actggaagcg | gggttaagcg | ga | | | 1652 |

<210> 65
 <211> 1085
 <212> DNA
 <213> homo sapiens

<400> 65

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| cctactccac | cagcagcacg | gaggaggagc | tggagcagtt | cagcagcccc | agcgtgaaga | 120 |
| agaagccctc | catgatcctg | ggcaaggctc | ggcaccggct | gagctttgcc | agtttcagca | 180 |
| gcatgttcca | cgttttctc | tccaacaacc | gcaagctgta | caagaagggtg | gtggagctgg | 240 |
| cgcaggacaa | gggctcgtac | tttggcagcc | tgggtgcagga | ctacaagggtg | tacagcctgg | 300 |
| agatgatggc | gcgccagacc | tccagcacgg | agatgctgca | ggagattcgc | accatgatga | 360 |
| cccagctcaa | gagctacctg | ctgcagagca | ccgagctcaa | ggccctgggtg | gaccccgccc | 420 |
| tgcactccga | ggaggagctc | gaagcaattg | tagagtctgc | cttgtaaaaa | tgtgtcctga | 480 |
| agcccttgaa | ggaagccatc | aactcatgcc | tgcacagat | ccacagcaag | gatggttcgc | 540 |
| tgcagcagct | caaggagaac | cagttagtga | tccctggccac | caccaccact | gacctaggtg | 600 |
| tgaccaccag | cgtgccggag | gtgcccatga | tggagaagat | cctgcagaag | ttcaccagca | 660 |
| tgcacaaggc | ctactcacct | gagaagaaga | tctccatcct | gctcaagacc | tgcaaaactca | 720 |
| tctacgactc | catggccctc | ggcaaccacg | ggaagcccta | tggggcggat | gacttcctgc | 780 |
| ctgtgctcat | gtatgtgctg | gcccgcagca | acctcacgga | gatgcttctc | aatgtggagt | 840 |
| acatgatgga | gctcatggac | cccgccttgc | agctggggga | gggttcctac | tatctgacca | 900 |
| ccacctacgg | ggccctggag | cacatcaaga | gctacgacaa | gatcacggtg | acccggcagc | 960 |
| tgagtgtgga | ggtgcaggac | tccatccacc | gctgggagcg | ccggcgctact | ctcaacaagg | 1020 |
| ccggggcctc | ccgctcctcc | gtacagccac | ttcatctgcg | tgtcgtacct | ggagcccagag | 1080 |
| cagca | | | | | | 1085 |

<210> 66
 <211> 1393
 <212> DNA
 <213> homo sapiens

<400> 66

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| gggcagggga | gggagttgac | gggctgacac | aggaaactcc | cctgaaacct | gtttctcagc | 60 |
| ttcccggccc | agctggggga | cccactggaa | ggagaggcca | ggcgggaagac | cctggctccg | 120 |
| tcatggcctc | tgccctgagg | ccaccccggtg | tccccaaagg | taagggtgtc | ctgccttcac | 180 |
| actactatga | gagctttcta | gagaagaagg | ggccctgtga | ccgggattac | aagaagttct | 240 |
| gggcaggcct | gcagggtctc | accattttatt | tctacaatag | caatcgggac | ttccagcacg | 300 |
| tggagaagct | caacttggga | gcatttgaga | aactcacaga | tgagattccc | tggggaagct | 360 |
| cacgtgaccc | tggcaccac | ttcagcctga | ttctccggaa | tcaggagatc | aagttcaagg | 420 |
| tagagacctt | ggagtgtcgg | gaaatgtgga | aaggcttcat | cttaacggtg | gtggagctcc | 480 |
| gtgtcccgcac | cgacttgacc | ctgcttcctg | ggcacctata | catgatgtct | gaagtcttgg | 540 |

| | | | | | | |
|-------------|-------------|-------------|-------------|------------|------------|------|
| ccaaagagga | ggcgcgccgt | gcactggaga | cacctctgtg | cttcctgaag | gtgagccggc | 600 |
| tggaggcaca | actgctcctg | gagcgctacc | ccgagtgcgg | gaacctgctg | ctgcggccca | 660 |
| gcggggacgg | cgccgacggg | gtcgggtcacc | acgcggcaga | tgcacaacgg | gacgcacgtg | 720 |
| gtccggcatt | acaagggtgaa | gcgggagggg | ccccaaagtac | gtgatcgatg | tggaacagcc | 780 |
| gttctcttgc | acctccctgg | acgccgtggg | caactatttc | gtgtcgcata | ccaaaaaggc | 840 |
| gctggtgcc | ttctgttag | acgaggacta | cgagaagggtg | ctaggctacg | tggaagccga | 900 |
| taaggagaat | ggcgagaatg | tgtgggtggc | gccctccgct | ccgggcccag | gtcctgcacc | 960 |
| ctgcacaggt | ggcccccaagc | cgctgtcacc | tgcgtctagc | caggacaagc | tgccccact | 1020 |
| gccccacta | ccgaaccagg | aagagaacta | cgtgacctct | attggagatg | gcccagctgt | 1080 |
| tgactatgag | aaccaagatg | tggcttcctc | tagttggcca | gtcatcctga | agccaaagaa | 1140 |
| gttgccaaag | cctcctgcca | agcttcctaa | gccaccggtt | ggaccaagc | cagagcccaa | 1200 |
| agtctttaat | ggctggcttg | gcagggaagc | gtccagttca | gtttcagccc | agcctcttct | 1260 |
| ttccccacag | gcggggctgg | gcagacatgg | acggcagagt | tacagaagaa | gctgggagaa | 1320 |
| gaggcggggc | actggtagca | tggtttcgga | cacaccaggg | accagcgggt | tagttccagg | 1380 |
| gcggggccagg | tgg | | | | | 1393 |

<210> 67
 <211> 1248
 <212> DNA
 <213> homo sapiens

<400> 67

| | | | | | | |
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| gctgcgggtcc | ggtgtgacct | cccaaggcat | tcacctgagg | agtccctggg | gctgcacccc | 120 |
| aaccacaggca | gagctcatcg | tgggtgacca | gagcgggggt | atccacatct | gggacttgaa | 180 |
| aacagaccac | aacgagcagc | tgatccctga | gcccagaggc | tccatcacgt | ccgcccacat | 240 |
| cgatcccgag | gccagctaca | tggcagctgt | caatagcacc | ggaaactgct | atgtctggaa | 300 |
| cttgacgggg | ggcattgggtg | acgaggtgac | ccagctcacc | cccaagacta | agatccctgc | 360 |
| ccacacgcgc | tacgcccctgc | agtgtcgctt | cagccccgac | tccacgctcc | tcgccacctg | 420 |
| ctcggtctgat | cagacgtgca | agatctggag | gacgtccaac | ttctccctga | tgacggagct | 480 |
| gagcatcaag | agcggcaacc | ccggggagtc | ctcccgcggc | tggatgtggg | gctgcgcctt | 540 |
| ctcggggggac | tcccagtaca | tcgtcactgc | ttcctcggac | aacctggccc | ggctctgggtg | 600 |
| tgtggagact | ggagagatca | agagagagta | tggcgggccac | cagaaggctg | ttgtctgcct | 660 |
| ggccttcaat | gacagtgtgc | tgggctagcc | tgtgacctct | cgggactgcc | tgggtgcagg | 720 |
| ggtggcagct | ggaggggaccc | atgcagcacc | caggctcagag | cagaccctcc | cctgccgggc | 780 |
| tgcgccactg | gacctgatgg | ccccctgtgg | cgccttgacc | tgctgggcca | ggctgcctctg | 840 |
| ggactctcag | cccccagttg | cttatccaga | tgtgacagag | ctcgacccaa | gccaggctgc | 900 |
| acactcctgg | actggacattg | cctgcactgc | ctgggaaagt | cggccgaggg | cccaaagctg | 960 |
| ctgaggggtc | tgaggctggg | gcccaccccc | aagctagtgt | gttctctgct | cctccctgcc | 1020 |
| cgcgtttcag | ggcctcgggtc | catagagaac | accaccacca | tggccagggtg | gaagggttta | 1080 |
| ttagtccctg | ccagcagctg | tcctccctgg | tgcagggtggc | ctggccagcc | cactggattg | 1140 |
| gggacggggc | aggctggggc | aggctggggg | ctcagctctg | gaggtaataa | aagcagaccg | 1200 |
| acacgcagat | gttgctcggg | aaaaaaaaaa | aaaaaaaaaa | aaaaaaaaaa | | 1248 |

<210> 68
 <211> 1099
 <212> DNA
 <213> homo sapiens

<400> 68

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| aacaacagaa | attatctgtc | atttgagaag | tggcttgaca | atcattttgag | ctttgaaagc | 120 |
| agtccactgtg | gtgtaatatg | aatgctgtcc | tagtggtcat | agtaccaagg | gcacgtgtct | 180 |
| cccccttgga | taactgattt | cctttttagt | cctctactgc | taaataagtt | aattttgcat | 240 |
| tttgcagaaa | gaaacattga | ttgctaaatc | tttttgctgc | tgtgttttgg | tgttttcatg | 300 |
| tttacttggt | ttatattgat | ctgttttaag | tatgagaggc | ttatagtgcc | ctccattgta | 360 |
| aatccatagt | catcttttta | agcttattgt | gtttaagaaa | gtagctatgt | gttaaacaga | 420 |
| ggtgatggca | gcccttccct | agcacactgg | tggagagagc | cccttaagaa | cctgacccca | 480 |
| gtgaatgaag | ctgatgcaca | gggagcacca | aaggaccttc | gttaagtgtg | aattgtcctg | 540 |
| gcctctcagc | catgaccgtt | atgaggaaat | atccccccatt | cgaacttaac | agatgcctcc | 600 |
| tctccaaaaga | gaattaaaat | cgtagcttgt | acagatcaag | agaatatact | gggcagaatg | 660 |

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<210> 69

<211> 774

<212> DNA

<213> homo sapiens

<400> 69

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ataatgaatg ctgagttctt aggaagatta atccaggagt agtctccagg atgtactgga 180
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ttagaaagtg ttgcctctga ctctaacaca ctcttctctc tttctttacc gccctccctg 720
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<210> 70

<211> 426

<212> DNA

<213> homo sapiens

<400> 70

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aaatgtaaat tgctgctacc ctactaagtt actgtcagta aatactgtgt gcagtaaatg 180
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taagaattgg gcttctgaca tacattcttt ttaattcttt tcgtattggg ttttatagca 300
ctaaacctaa tttctaacat atttttacac ctgaaatcta cattctaata taaaggtttt 360
tttttataac gttcctaaaa tttcaggccc tcagcaggca gtttttgtcc cagttttctt 420
caacag 426

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<210> 71

<211> 1417

<212> DNA

<213> homo sapiens

<400> 71

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<400> 72

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<400> 73

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| gggagctaac | ctggaatgag | gagagtacct | gctgcaggac | ctggagggtca | ggtgtgaat | 1440 |
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<211> 1516

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<213> homo sapiens

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| tattaagcct | gaagacttct | aaaaagacaa | gaaacatggc | ctaaataacc | aacatagatt | 1260 |
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<210> 75

<211> 1419

<212> DNA

<213> homo sapiens

<400> 75

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| caaagggtta | gtgccttgag | gaaactgagg | tagctgggtt | gggtcccttc | caggaattca | 180 |
| gagtcctgg | gcaggggcat | gggaaataga | cagatgtaat | tctatagcct | gggcttgga | 240 |
| ccctccacct | ccacgcccc | ccagcattgc | cttacgcctc | ccttgcccca | cgtagatgg | 300 |
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<213> homo sapiens

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<210> 77
 <211> 1962
 <212> DNA
 <213> homo sapiens

<400> 77

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 <211> 788
 <212> DNA
 <213> homo sapiens

<400> 78

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<211> 299
<212> DNA
<213> homo sapiens

<400> 79

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<210> 80
<211> 2263
<212> DNA
<213> homo sapiens

<400> 80

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<210> 81
<211> 1284
<212> DNA
<213> homo sapiens

<400> 81

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<210> 82

<211> 1335

<212> DNA

<213> homo sapiens

<400> 82

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<210> 83

<211> 1890

<212> DNA

<213> homo sapiens

<400> 83

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| gctccccgc | tccggaccgc | gggctcccc | tagcgccgct | gaggagccgc | ctctgcggtc | 120 |
| caggagggcg | caggagcggg | actgagagcg | cctggaggct | cgagcagagg | atagaaggac | 180 |
| aaggacagaa | tcaccagcac | tggctgaagg | taccttaaca | tggggaatct | tcttaaagtt | 240 |
| ttgacatgca | cagaccttga | gcaggggcca | aattttttcc | ttgattttga | aaatgccag | 300 |
| cctacagagt | ctgagaagga | aattttataat | caggtgaatg | tagtattaaa | agatgcagaa | 360 |
| ggcatcttgg | aggacttgca | gtcatacaga | ggagctggcc | acgaaatacg | agaggcaatc | 420 |
| cagcatccag | cagatgagaa | gttgcaagag | aaggcatggg | gtgcagttgt | tccactagta | 480 |
| ggcaaattaa | agaaatttta | cgaattttct | cagaggttag | aagcagcatt | aagaggctct | 540 |
| ctgggagcct | taacaagtag | cccattttct | cccaccagc | atctagagcg | agagcaggct | 600 |
| cttgctaaac | agtttgacga | aattcttcat | ttcacactcc | ggtttgatga | actcaagatg | 660 |
| acaaatcctg | ccatacagaa | tgatttcagc | tattatagaa | gaacattgag | tcgtatgagg | 720 |
| attaacaatg | taccggcaga | aggagaaaat | gaagtaaata | atgaattggc | aaatcgaatg | 780 |
| tctttgtttt | atgctgaggg | aactccaatg | ctgaaaacct | tgagtgatgc | cacaacaaaa | 840 |
| tttgtatcag | agaataaaaa | tttaccaata | gaaaatacca | cagattgttt | aagcacaatg | 900 |
| gctagtgtat | gcagagtcac | gctggaaaca | ccggaataca | gaagcagatt | tacaaatgaa | 960 |
| gagacagtgt | cattctgctt | gagggtaatg | gtgggtgtca | taatactcta | tgaccacgta | 1020 |
| catccagtgg | gagcatttgc | taaaacttcc | aaaattgata | tgaaagggtg | tatcaaagtt | 1080 |
| cttaaggacc | aacctcctaa | tagtgtggaa | ggtcttctaa | atgctctcag | gtacacaaca | 1140 |
| aaacatttga | atgatgagac | tacctccaag | caaattaaat | ccatgctgca | ataacaattc | 1200 |
| tggaataagc | acctgctgta | gacagaagac | agtattctgc | aatgactgag | aatgcagttt | 1260 |
| tttagtgatt | gcaattacta | tctcatttat | tcttgctttt | atctcttctc | tctgttctct | 1320 |
| ttccctcttt | tttaatcatg | ttcttaagac | ttcttttctg | tgccaaaatc | agtaaagttt | 1380 |
| cactctgaag | ggatatcatc | ctttcaaacg | ggccatctaa | ggcagcta | tatgcattgc | 1440 |
| attggggctc | ctactgagaa | aaattctgtg | acttgaacta | aatattttta | aatgtggatt | 1500 |
| ttttttgaaa | ctaataattta | atattgcttc | tcctgcatgg | caaaaactgc | tattctgcta | 1560 |
| tttaaaaaac | ctcaatgact | ttattttcta | ctgccgcctt | tttcatgtgc | aaccaaaatg | 1620 |
| aaaatgttta | aattcaatgt | gttgtaacaa | tggtataccaa | cacaaacttt | ttttaaatat | 1680 |
| gtaatacttt | tgtttaaaagt | tttaagtttg | cattttgact | ttttttgtaa | ggatgtatgt | 1740 |
| tgtgtgttta | acctttatta | actaacgtta | aaagctgtga | tgtgtgcgta | gaatattacg | 1800 |
| tatgcatgtt | catgtctaaa | gaatggctgt | tgatgataaa | ataaaaaatca | gctttcattt | 1860 |
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<210> 84

<211> 1829

<212> DNA

<213> homo sapiens

<400> 84

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| gggcgagtgc | ccactgctca | agcgacggc | ttgggtgggtg | aggaggacct | gttcaacaca | 120 |
| ctgccacccg | aggtgaagga | gcggctgtgg | agggtgaca | aggagcaggc | ctgagcgagg | 180 |
| ccggcccagc | acagcaagca | gcaggaccgc | tgcccagtc | tcaggcccgg | aggggcaggc | 240 |
| ctagcttctc | ccagaactcc | cggacagcca | ggacagcctc | gtggctgggc | aggagcctgg | 300 |
| ggcgcttgt | gagtcaggcc | agagcgagag | gacagtatct | gtggggctgg | cccctttct | 360 |
| ccctctgaga | ctcacgtccc | ccagggcaag | tgcttgtgga | ggagagcaag | tctcaagagc | 420 |
| gcagtatttg | gataatcagg | gtctctctcc | tgagggccag | ctctgcccc | ggggctgagc | 480 |
| tgccaccaga | ggtcctggga | ccctcacttt | agttcttggg | atttattttt | ctccatctcc | 540 |
| cacctccttc | atccagataa | cttatacatt | cccaagaaag | ttcagcccag | atggaagggtg | 600 |
| ttcagggaaa | ggtgggctgc | cttttcccct | tgctcttatt | tagcgatgcc | gccgggcatt | 660 |
| taacacccac | ctggacttca | gcagagtggg | ccggggcgaa | ccagccatgg | gacggtcacc | 720 |
| cagcagtgcc | gggctgggct | ctgcggtgcg | gtccacggga | gagcaggcct | ccagctggaa | 780 |
| agggccaggc | tggagcttgc | ctcttcagta | tttgtggcag | ttttagtttt | ttgttttttt | 840 |
| tttttaaatc | aaaaaacaat | ttttttaaaa | aaaaaagctt | tgaaaatgga | tggtttgggt | 900 |
| attaaaaaga | aaaaaaaaac | ttaaaaaaa | aaagacacta | acggccagtg | agttggagtc | 960 |
| tcagggcagg | gtggcagttt | cccttgagca | aagcagccag | acgttgaact | gtgtttctct | 1020 |
| tccttggggc | caggggtgcg | ggtgtcttcc | ggatctgggtg | tgaccttggg | ccaggagttc | 1080 |
| tatttgttcc | tggggaggga | gttttttttg | gtgtcttggg | ttctttctcc | tccatgtgtc | 1140 |
| ttggcaggca | ctcatttctg | tggctgtcgg | ccagagggaa | tgttctggag | ctgccaaggga | 1200 |
| gggaggagac | tcgggttggc | taatccccgg | atgaacgggtg | ctccattcgc | acctccccctc | 1260 |
| ctcgtgcctg | ccctgcctct | ccacgcacag | tgtaaaggag | ccaagaggag | ccacttcgcc | 1320 |

| | | | | | | |
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| cagactttgt | ttccccaccg | cctgcggcat | gggtgtgtcc | agtgccaccg | ctggcctccg | 1380 |
| ctgcttccat | cagccttgtc | gccacctggt | ccttcatgaa | gagcagacac | ttagaggctg | 1440 |
| gtcgggaatg | gggaggtcgc | ccctgggagg | gcaggcggtg | gttccaagcc | ggttcccgtc | 1500 |
| cctggcgctt | ggagtgcaca | cagcccagtc | ggcacctggt | ggctggaagc | cacctgctt | 1560 |
| tagatcactc | gggtccccac | cttagaaggg | tccccgcctt | agatcaatca | cgtggacact | 1620 |
| aaggcacgtt | ttagagtctc | ttgtcttaat | gattatgtcc | atccgtctgt | ccgtccattt | 1680 |
| gtgttttctg | cgtcgtgtca | ttggatataa | tcctcagaaa | taatgcacac | tagcctctga | 1740 |
| caaccatgaa | gcaaaaatcc | gttacatgtg | ggtctgaact | tgtagactcg | gtcacagtat | 1800 |
| caaataaaat | ctataacaga | aaaaaaaa | | | | 1829 |

<210> 85

<211> 2358

<212> DNA

<213> homo sapiens

<400> 85

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| gcgcgcgcgc | ctcggtcccc | atagcgcgcg | cgacagggtc | cggacgcgcg | ccgaacatgg | 120 |
| actccgcgcg | ccaagatata | aacctgaatt | ctcctaacia | aggctctgctg | tctgactcca | 180 |
| tgacggatgt | tctgttcgac | acagggtgtg | ctgcccggac | tctgctgttt | gagggtctga | 240 |
| cagaggctga | ggaggaggag | ctcagggtctg | agcttaccaa | gggtggaagag | gaaattgtca | 300 |
| ctctgcgcca | ggtcctggca | gccaaaggaga | ggcactgtgg | agagctcaag | aggaggctgg | 360 |
| gcctctccac | cctgggggag | ctgaaacaga | acctgtccag | gagctggcat | gacgtgcagg | 420 |
| tctctagcgc | ctatgtgaaa | acttctgaga | aacttggaga | gtggaatgag | aaagtgacct | 480 |
| agtcagacct | ctacaagaag | actcaggaaa | ctctttcaca | ggcaggacag | aagacttcag | 540 |
| ctgcccgtgc | cacagtgggc | tctgccatca | gcaggaagct | tggagacatg | aggaactctg | 600 |
| cgaccttcaa | gtcgttttag | gaccgagttg | ggaccataaa | gtctaagggt | gtgggtgaca | 660 |
| gagagaacgg | cagtgaacaac | ctcccttcct | cagcggggag | tggtgacaag | cccctgtcgg | 720 |
| atccgcaccc | tttctaagcc | tgtggttgct | tcaccgcctg | cagagcacac | gcaacccagc | 780 |
| ctcagcatca | cagccgcagc | tctgttcagc | ggagcagcca | gccagggcgg | atgagcagag | 840 |
| ccggccctga | ggacagtcct | gccccatccac | gcggagatgt | ggctgccgcg | tttgcataga | 900 |
| tttgaagaac | acaggcttgt | acacagatgt | tttactactca | cgtttgtaga | tgaaacagat | 960 |
| cactgtgctg | tcttccctag | gggtgcagga | agtggacagg | gcggagggtt | tgaaagaata | 1020 |
| ttgagccaaa | gcccaggctc | cctttgggaa | tcatgttagc | ccatcagaat | gttgaaggat | 1080 |
| tgaagagttc | taagcataaa | ataagtggca | ttttctgact | tcttctcctc | cctccttccc | 1140 |
| tgactcacag | aaggaatgca | atcaccagc | aagtcttacc | tgttacgcaa | ttttttatct | 1200 |
| caaaatgccg | aacgagaaaa | ctgtccattt | tctgagacc | ccagaaagga | aactgacctt | 1260 |
| cagcagctgc | ctgattgtta | cgcaaatcta | gctttaacgg | aagcaaattc | attatttttt | 1320 |
| aaatgcagtg | gacttttcaa | aaagttaa | ttaggcaaa | cagcttttagc | ctcatagaat | 1380 |
| attattttct | tggactcaag | ctgaaataca | agccttacat | tgcccttatgc | tttattttct | 1440 |
| tctaattttt | atatgtatat | agatgagggt | tccttaattg | ttgtgagcat | tgtgtggaat | 1500 |
| tttacacctg | gcctgcgtgg | cagcctcttc | cagttgaggt | gttttatgtc | acgcacactc | 1560 |
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| gccctgccct | aaagggtctc | tgagcctctg | ggaatgggag | gggccaagag | aaggaaaacc | 1680 |
| ctgtcttttag | caccctttaa | aagaactgtg | cccccttct | cagtgtgtcc | tttgcattgg | 1740 |
| cctggcccgg | ctcgcatcgc | tcagtgactc | caaccctcct | gcttgctgta | cttgggatga | 1800 |
| aacgacccca | cagggtcagg | ggagggtggg | gcgtgggcat | cagccaggat | tgccgttaca | 1860 |
| gtctttttct | caggagctac | aaagatctct | tcctgttact | aaatggtcgc | accccagcag | 1920 |
| cctctctcgc | acaccggggc | cctgcatgtc | agatggcggt | gtctgcaggg | ggagctctgt | 1980 |
| gccttagtggt | ctcttggcag | gacactgagg | gcctgcctgt | ggtgtgcccg | gctctgccac | 2040 |
| tcgccgggag | ggaagggtctg | ctcagctcaa | ggtgtcctgt | tcggtagagc | aagtgtcctc | 2100 |
| tgacagccgt | gtccccggac | agttcagaca | cccttgggga | tggcactcca | cacacgacag | 2160 |
| agatgcaggg | gccagggaag | cccagcgctc | ggtgcccttc | gtccagggtt | aaaatcggcc | 2220 |
| tgtggggtgt | ggtgagaagg | caggttgtgc | gggtgttgac | cgatgtatct | tttcttaaaa | 2280 |
| gttattataa | taatgggtaa | tttgtcaata | aagcattcct | ttgggggaaa | aaaaaaaaaa | 2340 |
| aaaaaaaaaa | aaaaaaaaaa | | | | | 2358 |

<210> 86

<211> 1646

<212> DNA

<213> homo sapiens

<400> 86

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| actgaggttg | tcataacatg | caaattgctt | caattttctc | tgtggcccaa | acttgtgggt | 1680 |
| cacaaacctt | gttgagataa | agctggctgt | tatctcaaca | tcttcatcag | ctccagactg | 1740 |
| agactcagtg | tctaagtctt | acaacaatc | atcattttat | accttcaatg | ggaacttaaa | 1800 |
| ctgttacatg | tatcacattc | cagctacaat | acttccattt | attagaagca | cattaacctt | 1860 |
| ttctatagca | tgatttcttc | aagtaaaagg | caaaagatat | aaattttata | attgacttga | 1920 |
| gtactttaag | ccttgtttaa | aacatttctt | acttaacttt | tqcaaatata | acccatttga | 1980 |

| | | | | | | |
|------------|------------|------------|------------|------------|------------|------|
| gcttacctgt | aatatacata | gtagtttacc | tttaaaagtt | gtaaaaatat | tgctttaacc | 2040 |
| aacactgtaa | atatttcaga | taaacattat | attcttgtat | ataaacttta | catcctgttt | 2100 |
| tacctataaa | aaaaaaaaaa | aaaaaaaaaa | aaaaaaagg | aa | | 2142 |

<210> 92
 <211> 1111
 <212> DNA
 <213> homo sapiens

<400> 92

| | | | | | | |
|-------------|-------------|-------------|------------|-------------|------------|------|
| cgtgggcgaa | catgggagct | gttcctcgcg | ggccgcggg | tgctggtcac | cggggcaggc | 60 |
| aaaggtatag | ggcgcgccac | ggtccaggcg | ctgcacgcga | cgggcgcgcg | ggtggtggct | 120 |
| gtgagccgga | ctcaggcgga | tcttgacagc | cttgctcgcg | agtggccggg | gatagaaccc | 180 |
| gtgtgctgg | acctgggtga | ctgggaggcc | accgagcggg | cgctgggcag | cgtagggccc | 240 |
| gtggacctgc | gcggagactg | cgccgacatg | gagctgttcc | tcgcggggccg | ccgggtgctg | 300 |
| gtcaccgggg | caggcaaagg | tatagggcgc | ggcacggtcc | aggcgctgca | cgcgacgggc | 360 |
| gcgcgggtgg | tggtctgtgag | ccggactcag | gcggatcttg | acagccttgt | ccgcgagtgc | 420 |
| ccggggatag | aaccctgtgtg | cgtggacctg | ggtgactggg | aggccaccga | gcgggcgctg | 480 |
| ggcagcgtgg | gccccgtgga | cctgctgggtg | aacaacgccc | ctgtcgccct | gctgcagccc | 540 |
| ttcctggagg | tcaccaagga | ggcctttgac | agatcctttg | aggtgaacct | gcgtgcggtc | 600 |
| atccaggtgt | cgcagattgt | ggccaggggc | ttaatagccc | ggggagtccc | aggggccatc | 660 |
| gtgaatgtct | ccagccagtg | ctcccagcgg | gcagtaacta | accatagcgt | ctactgctcc | 720 |
| accaaggggtg | ccctggacat | gctgaccaag | gtgatggccc | tagagctcgg | gccccacaag | 780 |
| atccgagtga | atgcagtaaa | ccccacagtg | gtgatgacgt | ccatgggcca | ggccacctgg | 840 |
| agtgaccccc | acaaggccaa | gactatgctg | aaccgaatcc | cacttggcaa | gtttgctgag | 900 |
| gtagagcacg | tggtgaacgc | catcctcttt | ctgctgagtg | accgaagtgg | catgaccacg | 960 |
| ggttccactt | tgccggtgga | agggggcttc | tgggcctgct | gagctccctc | cacacacctc | 1020 |
| aagccccatg | ccgtgctcat | cctaccccca | atccctccaa | taaacctgat | tctgctgccc | 1080 |
| aaaaaaaaaa | aaaaaaaaaa | aaaaaaaaaa | g | | | 1111 |

<210> 93
 <211> 657
 <212> DNA
 <213> homo sapiens

<400> 93

| | | | | | | |
|------------|-------------|------------|------------|-------------|------------|-----|
| atttaaagcc | tggtattgtaa | ccagattttc | ttttttcccc | cttctcagct | gtagatatga | 60 |
| tatctccttt | caggggcccca | gcttaagggc | aaagttagtt | aatgtgtaga | caaaggcgag | 120 |
| ggacaagaga | gagttaacat | ctagacagtg | gaaaaagcca | tggtgtgtgg | tttctgggaa | 180 |
| ccaccaacac | ttgcaggttt | agctttttcc | cagggttgac | tacaagaaag | aaaacctatg | 240 |
| ttttgcaaga | ttaaaatgtg | gttgagtgtg | cctaaattaa | ccatccccat | ttttatcata | 300 |
| tttccaccat | cacttcaggg | ttttaagagt | cagtgtctac | ctgggcccga | tggtagtaca | 360 |
| ttttgcttct | tagaaagcta | agtcctgggt | tccgtctgat | tttaggttcc | aggaacttcc | 420 |
| tgagaacacc | cgatcgcaga | gggtaatttt | ctggagtttg | ttttgcaggg | atagctggga | 480 |
| gtatggccac | cctgctccac | gatgcggtaa | tgaatccagc | agaagtgggtg | aagcagcgct | 540 |
| tgagatgta | caactcgcat | caccggtcag | caatcagctg | catccggacg | gtgtggagga | 600 |
| ccgagggggt | gggggccttc | taccggagct | acaccacgcc | gagccctatc | tcgtgcc | 657 |

<210> 94
 <211> 863
 <212> DNA
 <213> homo sapiens

<400> 94

| | | | | | | |
|------------|------------|------------|------------|------------|------------|-----|
| gcggtcggta | gtgcggcgct | gtttaaagat | ggcgggcgag | gaacctcagc | agcagaagca | 60 |
| ggagccgctg | ggcagcgact | ccgaagggtg | taactgtctg | gcctatgatg | aagccatcat | 120 |
| ggctcagcag | gaccgaattc | agcaagagat | tgctgtgcag | aacctctctg | tgtagagcgc | 180 |
| gctggagctc | tcggtcctat | acaaggagta | tgctgaagat | gacaacatct | atcaacagaa | 240 |
| gatcaaggac | ctccacaaaa | agtactcgta | catccgcaag | accaggcctg | acggcaactg | 300 |
| tttctatcgg | gctttcggat | tctcccaact | ggaggcactg | ctggatgaca | gcaaggagtt | 360 |

| | | | | | | |
|-------------|-------------|------------|------------|------------|------------|-----|
| gcagcgggttc | aaggctgtgt | ctgccaagag | caaggaagac | ctggtgtccc | agggcttcac | 420 |
| tgaattcaca | attgaggatt | tccacaacac | gttcatggac | ctgattgagc | aggtggagaa | 480 |
| gcagacctct | gtcgccgacc | tgctggcctc | cttcaatgac | cagagcacct | ccgactacct | 540 |
| tgtggtctac | ctgcggtctg | tcacctcggt | ctacctgcag | cgcgagagca | agttcttcga | 600 |
| gcacttcac | gaggggtggac | ggactgtcaa | ggagttctgc | cagcaggagg | tggagcccat | 660 |
| gtgcaaggag | agcgaccaca | tccacatcat | tgcgttggcc | caggccctca | gcgtgtccat | 720 |
| ccaggtggag | tacatggacc | gcggcgaggg | cggcaccacc | aatccgcaca | tcttcctga | 780 |
| gggcttccga | gccccagggtc | ttaccttgtt | ttaaccggct | tggggcaatt | taggtattgc | 840 |
| tttttacaaa | taggggtttg | ggt | | | | 863 |

<210> 95

<211> 1015

<212> DNA

<213> homo sapiens

<400> 95

| | | | | | | |
|-------------|-------------|------------|------------|-------------|------------|------|
| aattcgggaac | gagggcgct | gcaagccatg | atgaccacc | tgcattgtgaa | gtctacagaa | 60 |
| cccaaagctg | ccccctagcc | cctgaatctg | gtatcaagt | tcaccctctc | caagtccgca | 120 |
| tcggaggctt | ctccacagag | cttacctcat | actccaacga | ccccaaccgc | ccccctgact | 180 |
| cccgctaccc | aaggccccctc | tgctatcaca | accaccagca | tgcacacggt | gggacctatc | 240 |
| cgcaggcggt | actcagacaa | atacaacgtg | cccatttctg | cagcagatat | tgcgagaaac | 300 |
| caagaatttt | ataagaacgc | agaagttaga | ccaccattta | catatgcatc | tttaattagg | 360 |
| caggccattc | tcgaatctcc | agaaaagcag | ctaactacta | atgagatcta | taactgggtc | 420 |
| acacgaatgt | ttgcttactt | ccgacgcaac | gcggccacgt | ggaagaatgc | agtgcgtcat | 480 |
| aatcttagtc | ttcacaagt | ttttgtgcga | gtagaaaacg | ttaaaggggc | agtatggaca | 540 |
| gtggatgaag | tagaattcca | aaaacgaagg | ccacaaaaga | tcagtggtaa | cccttccctt | 600 |
| attaaaaaca | tgcagagcag | ccacgcctac | tgcacacctc | tcaatgcagc | tttacaggct | 660 |
| tcaatggctg | agaatagtat | acctctatc | actaccgctt | ccatgggaaa | tcccactctg | 720 |
| ggcaacttag | ccagcgcaat | acgggaagag | ctgaacgggg | caatggagca | taccaacagc | 780 |
| aacgagagtg | acagcagtc | aggcagatct | cctatgcaag | ccgtgcatcc | tgtacacgtc | 840 |
| aaagaagagc | ccctcgatcc | agaggaagct | gaagggcccc | tgtccttagt | gacaacagcc | 900 |
| aaccacagtc | cagattttga | ccatgacaga | gattacgaag | atgaaccagt | aaacgaggac | 960 |
| atggagtgc | tatcggggcg | ggccaacccc | gagaatgaag | attggaaaaa | aaaaa | 1015 |

<210> 96

<211> 2532

<212> DNA

<213> homo sapiens

<400> 96

| | | | | | | |
|-------------|------------|------------|------------|------------|-------------|------|
| gctcgatgtg | caagtgaagg | atgattccag | ggccctgact | ttaggagcac | tgacgctgcc | 60 |
| tctggccccg | ctgctgactg | cccagaact | catcctggac | cagtgggttc | agctcagcag | 120 |
| ctctggtcca | aactccagac | tctatatgaa | actagtcag | aggatcctgt | acttggattc | 180 |
| atcagaaaata | tgttccccca | cggtgcctgg | ttgtcctggt | gcttgggacg | tggacagtga | 240 |
| gaatccccag | agaggcagca | gtgtggatgc | cccacctcga | ccctgtcaca | cgactcctga | 300 |
| tagccagttt | gggactgagc | atgtgcttcg | gatccatgta | ttagaggccc | aggacctgat | 360 |
| tgccaaagac | cgtttcttgg | ggggactggg | gaagggcaag | tcagaccctt | atgtcaaaact | 420 |
| aaagtgggca | ggacgaagct | tccggagcca | tgttggtcgg | gaagatctca | atccccgctg | 480 |
| gaatgaggtt | tttgaggtga | tcgtcacatc | agttccaggc | caagagctag | aggttgaagt | 540 |
| ctttgacaag | gacttggaca | aggatgattt | tctgggcagg | tgtaaagtgc | gtctcaccac | 600 |
| agtcttaaac | agtggcttcc | ttgatgagt | gctgaccctg | gaggatgtcc | catctggccg | 660 |
| cctgcacttg | cgcctggagc | gtctcacccc | ccgtcccact | gctgctgagt | tagaggaggt | 720 |
| gctgcaggtg | aatagtttga | tccagactca | gaagagtgcg | gagctggctg | cggccctgct | 780 |
| atccatctat | atggagcggg | cagaggacct | cccgtgcga | aaaggcacca | agcacctcag | 840 |
| cccttatgct | actctcactg | tgggagatag | ttctcataaa | accaagacta | tttcgcaaac | 900 |
| ttcagccccct | gtctgggatg | agagtgcctc | ctttctcatc | aggaaaccac | acactgagag | 960 |
| cctagagtgt | caggttcggg | gtgagggcac | tggcgtgctg | ggctcattat | ccctgccccct | 1020 |
| ctcagagctc | ctcgtggctg | accagctctg | cttggaccgc | tggtttacac | tcagcagtggt | 1080 |
| tcagggggcag | gtgctactga | gagcacagct | agggatcctg | gtgtcccagc | actcgggagt | 1140 |
| ggaagctcat | agccacagct | acagccacag | ctcctcatcg | ctgagtgaag | aaccagagct | 1200 |
| ctcgggggga | ccccctcaca | tcacctcctc | agccccagag | ctccggcagc | gcctaacaca | 1260 |

| | | | | | |
|-------------|-------------|------------|-------------|-------------|----------------|
| tggtgacagt | ccccctgagg | ctccagccgg | gcctctgggc | caggtgaaac | tgactctgtg1320 |
| gtactacagt | gaagaacgaa | agctggtcag | cattgttcat | ggttgccggt | cccttcgaca1380 |
| gaatggacgt | gatacctcctg | atccctatgt | gtcactgttg | ctactgccag | acaagaaccg1440 |
| aggcaccaag | aggaggacct | cacagaagaa | gaggaccctg | agtcctgaat | ttaatgaacg1500 |
| gtttgagtgg | gaactcccc | tggatgaggg | ccagagacga | aagctggatg | tctctgtcaa1560 |
| gtctaattcc | tccttcatgt | caagagagcg | tgactgctgg | ggaagggtgca | gctggacctal620 |
| gctgagacag | acctttccca | gggtgtagcc | cggtgggtatg | acctgatgga | caacaaggac1680 |
| aagggcagct | cctaggagct | ggcgagtccc | agcctgactg | ctctgtcttc | ctgccttcgt1740 |
| ctcgcctccat | caccgcctca | atgtgatgag | cctaaagcta | gggtccaagg | gcagagcctg1800 |
| tgcccttcag | ccctttcacc | taacaggccc | atattcgggc | ctttgcctga | ccaaagagaa1860 |
| gaaccgtatg | ttccctttac | tgacaggcct | ttatccttct | gggcccctgg | ggcggggacc1920 |
| tgagctgggt | gtttcctgct | ttgcctgcac | attgttctcc | cttccctcca | actcctcagg1980 |
| gccttctgta | tctgtgcctg | gccagtggca | gcactagcag | tggtattagc | ttatgccaaa2040 |
| tacagctttg | gaaggatctt | tttttcttta | actagatggg | caccttcttc | cctaccacac2100 |
| atgggtggga | aggtggacag | gctaacctct | ccagctgtga | gcctcttaga | ctactgcatg2160 |
| tagcaaatgt | tcagcagctc | aggcccccct | gtccagttct | gtccccactg | tcctcaaccc2220 |
| tgctctgaaa | attctactgc | tttgatggct | ggggccagtc | tcttgtcact | ttggaaactg2280 |
| aggacgcgtg | gattctactc | aagcctccaa | gtagtggcat | atcagtcttg | gagctcctag2340 |
| ctggtgatac | ggagagggct | ttggaggact | tgggacagca | gggccaattt | ttttgcccac2400 |
| gtgcctaggc | tgctaactca | ctgactagaa | cttaatctgg | tactttacag | ttttgcacca2460 |
| actctgccaa | gccactggat | cttacattaa | acatcatact | caaaaaaaaa | aaaaataaaa2520 |
| ataaaaaaaaa | aa | | | | 2532 |

<210> 97

<400> 97

000

<210> 98

<211> 776

<212> DNA

<213> homo sapiens

<400> 98

| | | | | | |
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| tttttttttt | tttttttttt | tttttttttt | ttttgagaca | aagtctcact | gtgtcaccca 60 |
| gactggaatg | cagtgcacaca | atctcggctc | actgaaacct | ctgccttcca | ggttcaagct120 |
| attctcatgc | ctcagcctct | caagtagctg | ggactacaga | tgtggggccac | catgtctggc180 |
| taattttttt | ttttttttgt | agagacaggg | tttcgccatg | ttgacgagac | tggtctcgaa240 |
| ctcctggcct | caagtgatct | gccgcctcag | cttctcaaag | tactgggatt | atataggcat300 |
| gagccactga | gcctggccct | gaagcgtttt | tctcaaaggc | cctcagttag | ataaattaga360 |
| tttggcatct | cctgtcctgg | gccagggatc | tctctacaag | agccccctgc | cctctgttgg420 |
| aggcacagtt | ttagaataag | gaggaggagg | gagaagagaa | aatgtaaagg | aggagatct480 |
| ttcccaggcc | gcaccatttc | tgtcactcac | atggacccaa | gataaaaaga | tggccaaacc540 |
| ctcacaaccc | ctgatgtttg | aagagttcca | agttgaaggg | aaacaaaaga | gtgtttgatg600 |
| gtgccagaga | ggggctgctc | tccagaaagc | taaaatttaa | tttctttttt | cctctgagtt660 |
| ctgtacttca | accagcctac | aagctggcac | ttgctaacaa | atcagaaata | tgacaattaa720 |
| tgattaaaga | ctgtgattgc | caccaaaaaa | aaaaaaaaaa | gccaggaaaa | aaaggg 776 |

<210> 99

<211> 629

<212> DNA

<213> homo sapiens

<400> 99

| | | | | | |
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| cggctcgact | tccgttactt | gctgcggagg | accgtgggca | gccagggtcg | gtgaaggatc 60 |
| ccaaaatggc | tgggcgaaaa | cttgctctaa | aaaccattga | ctgggtagct | tttgagaga120 |
| tcatacccca | gaacccaaaag | gccattgcta | gttccctgaa | atcctggaat | gagaccctca180 |
| cctccagggt | ggctgcttta | cctgagaatc | caccagctat | cgactgggct | tactacaagg240 |
| ccaatgtggc | caaggctggc | ttgggtggatg | actttgagaa | gaagttaa | gcgctgaagg300 |
| ttcccgtgcc | agaggataaa | tatactgcc | aggtggatgc | cgaagaaaaa | gaagatgtga360 |
| aatcttgtgc | tgagtgggtg | tctctctcaa | aggccaggat | tgtagaatat | gagaaagaga420 |
| tggagaagat | gaagaactta | attccatttg | atcagatgac | cattgaggac | ttgaatgaag480 |

```

ctttcccaga aaccaaatta gacaagaaaa agtatcccta ttggcctcac caaccaattg540
agaattttata aaattgagtc caggaggaag ctctggccct tgtattacac attctggaca600
ttaaaaaataa taattatata aaaaaaaaaa

```

```

<210> 100
<211> 757
<212> DNA
<213> homo sapiens

```

```

<400> 100

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ttctccaccc acgcggcagg ttccagggtgc cctggctgga gtcagtcctc atcgtagtca120
gcaacaacat tgacgaggag gcgctggccc gactggccca ggagggcagt gaggtgaatg180
tcattggcat tggcaccagt gtggtcacct gcccccaaca gccttccctg ggtggcgtct240
ataagctggt ggccgtgggg ggccagccac gaatgaagct gaccgaggac cccgagaagc300
agacgttgcc tgggagcaag gctgctttcc ggctcctggg ctctgacggg tctccactca360
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ggcctccagg gggccaggag ccctgcaccg tgaggccagc ccagggtggag ccactactgc480
ggctctgcct ccagcaggga cagctgtgtg agccgtctcc atccctggca gagtctagag540
ccttggccca gctgtccctg agccgactca gccctgagca caggcggtcg cggagccctg600
cacagtacca ggtggtgctg tccgagaggc tgcaggccct ggtgaacagt ctgtgtgctg660
ggcagtcctc ctgagactcg gagcggggct gactggaaac aacacgaatc actcactttt720
ccccacagga agaggagggtg agggaagagg gggggcgc

```

```

<210> 101
<211> 1262
<212> DNA
<213> homo sapiens

```

```

<400> 101

```

```

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cagctgcaga gatatacatg ggaacagagg ttccagaaga agatatttgc aatattctgc 180
atctttgcac ccagggtgatt gaaatctctg aatatcgaac ccagctctat gaatatctac 240
aaaatcgaat gatggccatt gcacccaatg ttacagtcac ggttggggaa ttagttggag 300
cagggttat tgctcatgca ggttctcttt taaatttggc caagcatgca gcttctaccg 360
ttcagattct tggagctgaa aaggcacttt tcagagccct caaatctaga cgggataccc 420
ctaagtatgg tctcatttat catgcttcac tcgtggggcca gacaagtccc aaacacaaag 480
gaaagatttc tgaatgctg gcagccaaaa ccgttttggc tatccgttat gatgcttttg 540
gtgaggattc aagttctgca atgggagttg agaacagagc caaattagag gccaggttga 600
gaactttgga agacagaggg ataagaaaaa taagtggaaac aggaaaagca ttagcaaaaa 660
cagaaaaata tgaacacaaa agtgaagtga agacttacga tccttctggt gactccacac 720
ttccaacctg ttctaaaaaa cgcaaaatag aacaggtaga taaagaggat gaaattactg 780
aaaagaaagc caaaaaagcc aagattaaag ttaaagttga agaagaggaa gaagaaaaag 840
tggcagaaga agaagaaaca tctgtgaaga agaagaagaa aaggggtaaa aagaaacaca 900
ttaaggaaga accactttct gaggaagaac catgtaccag cacagcaatt gctagtccag 960
agaaaaagaa gaaaaagaaa aaaaagagag agaacgagga ttaacagaaa ggaattacga1020
ttatatcacc cggacacaca tcatgcttaa gattcaactg ggagcatacc agggatgctc1080
tctaacgtaa tcaagggaag gttcagtaag acaaagtgat ttatcatcta taacttcaaa1140
cctatttgtc ttgacatcaa ctctgttaac cttatgtcat ctttcttag agtctttgat1200
atacaataa aattttcttt gtatttttaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa1260
aa

```

```

<210> 102
<211> 1281
<212> DNA
<213> homo sapiens

```

```

<400> 102

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ggcgggaagta gccgcaggca tggcggcggc tatgccgctg ttgctctgct cgtcctgttg 60

```

| | | | | | | |
|------------|-------------|-------------|-------------|-------------|-------------|------|
| ctcctggggc | cggcgggctg | gtgccttgca | gaacccccac | gcgacagcct | gcgggaggaa | 120 |
| cttgtcatca | ccccgctgcc | ttccggggac | gtagccgccca | cattccagtt | ccgcacgcgc | 180 |
| tgggattcgg | agcttcagcg | ggaaggagtg | tccattaca | ggctctttcc | caaagccctg | 240 |
| gggcagctga | tctccaagta | ttctctacgg | gagctgcacc | tgctattcac | acaaggcttt | 300 |
| tggaggaccc | gatactgggg | gccacccttc | ctgcaggccc | catcagggtgc | agagctgtgg | 360 |
| gtctggttcc | aagacactgt | cactgatgtg | gataaatctt | ggaaggagct | eagtaatgtc | 420 |
| ctctcagggg | tcttctgcgc | ctctctcaac | ttcatcgact | ccaccaacac | agtcactccc | 480 |
| actgcctcct | tcaaaccocct | gggtctggcc | aatgacactg | accactactt | tctgcgctat | 540 |
| gctgtgctgc | cgcggggaggt | gggtctgcacc | gaaaacctca | ccccctggaa | gaagctcttg | 600 |
| ccctgtagtt | ccaaggcagg | cctctctgtg | ctgctgaagg | cagatcgctt | gttccacacc | 660 |
| agctaccact | cccaggcagt | gcataccgcg | cctgtttgca | gaaatgcacg | ctgtactagc | 720 |
| atctcctggg | agctgaggca | gacctgttca | gttgattttg | atgccttcat | cacggggcag | 780 |
| ggaaagaaag | actggctcct | cttccggatg | ttctccgaa | ccctcacgga | gccctgcccc | 840 |
| ctggcttcag | agagccgagt | ctatgtggac | atcaccacct | acaaccagga | caacgagaca | 900 |
| ttagaggtgc | acccaccccc | gaccactaca | tatcaggacg | tcctcctagg | cactcgggaag | 960 |
| acctatgcca | tctatgactt | gcttgacacc | gccatgatca | acaactctcg | aaacctcaac | 1020 |
| atccagctca | agtgggaagag | acccccagag | aatgaggccc | ccccagtgcc | cttcctgcat | 1080 |
| gcccagcggg | acgtgagtg | ctatgggctg | cagaaggggg | agctgagcac | actgctgtac | 1140 |
| aacacccacc | cataccgggc | cttcccgggtg | ctgctgctgg | acaccgtacc | ctgggtatctg | 1200 |
| cggctgttac | atccactacc | agcctgcccc | ggaccggctg | caacccccacc | tcttgagat | 1260 |
| gctgattcag | ctgcgggcca | a | | | | 1281 |

<210> 103

<211> 716

<212> DNA

<213> homo sapiens

<400> 103

| | | | | | | |
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| gggccccaga | aagagaccaa | tgtgtttgtgc | gacgggtggg | tggcagtgcc | agtggcagat | 60 |
| ggtaccaggc | gccccagaac | tctaaggggc | ctcaagtagt | ttaaaacctc | ggaggctgcc | 120 |
| tgacttgggg | ccaagggttt | ctatgctcag | gcctgacccc | tcattggatta | gtttctgctg | 180 |
| gaaaaacttt | ttctgccttc | ggccaggtct | ctatctcctt | ctgccttaac | atattttgga | 240 |
| aggttggttc | ccagcagaga | cggggccatg | ggctcacact | ctgacctctc | ccacggcatt | 300 |
| agccctgtct | cagcctctgg | gctgttacgc | aagttaattc | ctgcacaaga | ctcacaacag | 360 |
| ggctgtggag | gaagcaaaag | agcccttttt | atgcctctgt | agtaggactg | agagaggccc | 420 |
| tctggccagc | gtgagcctgc | tggttcttcc | cggactgtac | caggccttga | ggcggggtat | 480 |
| ggaaacgccc | cactctgggg | cctggcttgg | ggaaggggag | gcggcagggg | ttctttgggg | 540 |
| ttctcgaggg | tataatctga | gctctctggg | gaacgtgtgt | ccatttgtag | gcagtagtcc | 600 |
| gacacgtcgg | gggaactcaac | tttactactgg | gacaatctgt | gtgtgggtctg | ttttgtagaa | 660 |
| attcatccac | acaagagagt | ggaggcatga | acaggggtgg | ccttcctcgg | atctca | 716 |

<210> 104

<211> 1160

<212> DNA

<213> homo sapiens

<400> 104

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| tttgttggtg | gagaaaggag | agaaaggaaa | gcgcgagggg | ccgccgccac | caccagcgca | 60 |
| gagtcctgga | gctgtgagga | gattcggggc | gtcaccctgc | ctccctcgcg | tcccgccacc | 120 |
| ggccgcttct | gtcctcggac | ccattccaac | aatctcgtaa | aacatgggtg | attactatga | 180 |
| agttctaggc | gtgcagagac | atgcctcacc | cgaggatatt | aaaaaggcat | atcggaaact | 240 |
| ggcactgaag | tggcatccag | ataaaaaatcc | tgagaataaa | gaagaagcag | agagaaaaatt | 300 |
| caagcaagta | gcggaggcat | atgaagtgtc | gtcggatgct | aagaaacggg | acattctatga | 360 |
| caaatatggc | aaagaaggat | taaatgggtg | aggaggaggt | ggaagtcatt | ttgacagtcc | 420 |
| atgtgaattt | ggcttcacat | tccgtaaccc | agatgatgtc | ttcaggggaat | tttttggtgg | 480 |
| aagggaacca | ttttcatttg | acttctttga | agaccctttt | gaggacttct | ttgggaatcg | 540 |
| aaggggtccc | cgagggaagca | gaagccgagg | gacggggtcg | tttttctctg | cgttcagtgg | 600 |
| atttccgtct | tttggaagtg | gattttcttc | ttttgatata | ggatttactt | catttggtgc | 660 |
| actaggtcac | gggggcctca | cttcaattctc | ttccacgtca | tttggtggta | gtggcatggg | 720 |
| caacttcaaa | togatatcaa | cttcaactaa | aatgggttaat | ggcagaaaaa | tactacaaa | 780 |
| gagaattgtc | gagaacggtc | aagaaagagt | agaagtggaa | gaagatggcc | agttaaagtc | 840 |

```

cttaacaata aatggtgtgg ccgacgacga tgcctcgcgt gaggagcgca tgcggagagg 900
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attgattaga ccgattttt 1160

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<210> 105

<211> 1040

<212> DNA

<213> homo sapiens

<400> 105

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gttttcttgc ctgcctatga gaatcctcca gcatggattc ctccctcatga gagggtagac 180
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cgccaaaaag agaggactgt gcactagaaa gttgcagccc acagcccttc atgtggactc 540
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attcatcac ttttgagact ccagtgaagc gctgttttca ccccttcctc ctccatgcct 960
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gggcccggcc gtgggtggtc 1040

```

<210> 106

<211> 1336

<212> DNA

<213> homo sapiens

<400> 106

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ccgcaacggc ctggacaaag ccgcgaggtc cgcttcgagc gagctgagca ggccctgcgc 120
cggttcagcc agggcccccac acccgctgcc gctgtccccg agggcacggc agccgagggc 180
gctcccaggc aggaaaactg tgggtgccag cagggtccccg caggccgggc actagcacc 240
ctcccagcag ccccggtgcg acctgccggc ccctgacgga tgaggacgtg gtcaggctgc 300
ggccctgtga gaagaagcgg ctggacatcc gtggcaaact ttacctggcc cccctcacca 360
cgtgtgggaa cctgcccttc cgacggatct gcaagcgctt cggggcggat gtgacatgtg 420
gagagatggc cgtctgcacc aacctgctgc agggccagat gtccgagtg gcccactca 480
aacgccacca gtgtgaggac atctttggcg tccagctgga gggcgccctc cccgacacca 540
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aattttattc ttttaa 1336

```


<210> 107
<211> 812
<212> DNA
<213> homo sapiens

<400> 107

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ctacaagctg tctgcacggt ccttcatcag ccggcacagc caggggcgga ggagagaaga180
tgccctgtcc tcagaaggat gcctgtggcc tcggagacac agtgtcaggc aacggaatcc240
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cagccagggg cggaggagag aagatgccct gtcctcagaa ggatgcctgt ggccctcgga540
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<210> 108
<211> 2681
<212> DNA
<213> homo sapiens

<400> 108

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cacgatgggt gcctaccacc cgctgtctta tgagaagaat ttggtgaagc atctcaacca 180
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gccacccag cctgggaaga acattttcct gaacaattcc agcctgctcc ttttactcta 360
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atatctagca ttctttccag acagcatcct cccgccttc cacttggtg gatgcaagg 540
ctatctctcc catcagggtc gccaaagctg ggctttgttt ttcccagcag aatgatgcca 600
ttctcacaaa ccaatgctct atattgcttg aagtctgcat cttaaatttg atttcacgtt 660
ttaaagaaat tctcttaaat tacaattgtg cccaatgcag ggtggctctg gggggcaagt 720
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ccatgcccc cccaacgtgtt cctatcactc tggctgggtg ggctgggtcct tagactgggt 840
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```

| | | | | | | |
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| tgctccccta | ctgactagct | gtgccactct | gggcaaatgc | tcttccttga | gcctgtttcc | 2040 |
| acacctgtaa | agtggggatg | atgacccat | ctcactgctt | ttgtgaggat | tacaggaaag | 2100 |
| cacctgtcct | ggctctgtac | ctggcacgta | gtagggtgctc | agttcatgct | ggtttccttc | 2160 |
| ctgccttttag | tagggacctg | ctctgtgctc | acacctcggc | tgcattgcacc | ctgctgtgac | 2220 |
| ggaggctagt | gtggaagagg | tcctgtcctc | aggggaattaa | ctgtcttatt | gggagacaac | 2280 |
| aactgtcctc | cttggaacac | ccaagaaacc | atgcaaagca | gtggacaaca | cagaacacgc | 2340 |
| cctcctcctc | gctgcctgca | gctccaatct | gattctgctt | gggaatgggc | ggagcacgtg | 2400 |
| ggctgcttaa | ctgctgtata | ggacaagccc | cttaccctc | tctgggccc | tgaattcctg | 2460 |
| gcttggttta | tgttctgatt | tgacacactg | attttaatct | tcgaatcatg | acactgagtg | 2520 |
| cagaggaggt | ggcattccga | cagcaggaca | tacatgttgg | tgtgaagact | gggacgacac | 2580 |
| tgggtagaat | ctagttttta | attattatta | atataaagga | tcaaattaat | ttaaatatga | 2640 |
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<210> 109

<211> 1407

<212> DNA

<213> homo sapiens

<400> 109

| | | | | | | |
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| gctcagtcac | caccctgcgc | cccagagtga | ctcagccccc | acgtccccac | ccatccccgg | 120 |
| ggagccaggg | ccgcagaggg | aggtagataa | gtgggggtggc | agcctgggtc | ggccagagag | 180 |
| ttcaggccac | cccggccgga | cgcctgccac | ttgctgtcac | tgtgccgctg | tcattggcacg | 240 |
| ctccgggagt | gccacgccac | ctgcccgggc | tccgggagcc | cctccacgga | gcccacccca | 300 |
| gaggttggt | caggatgtca | gtgggcccc | gagggagctg | cgccctcggc | tctgccacct | 360 |
| gcgaaagga | cctcagggtc | atgggttcaa | cctgcatagt | gacaagtccc | ggccccggca | 420 |
| gtacatccgc | tctgtggacc | cgggtcacc | tgccgcccgc | tctggcctcc | gcgcccagga | 480 |
| ccggctcatt | gaggtgaacg | ggcagaatgt | ggagggactg | cgccatgctg | aggtggtggc | 540 |
| cagcatcaag | gcacgggagg | acgaggcccc | gctgctggtc | gtggaccccc | agacagatga | 600 |
| acacttcaag | cggtctcggg | tcacaccac | cgaggagcac | gtggaaggtc | ctctgccgtc | 660 |
| acccgtcacc | aatggaacca | gccctgccc | gctcaatggg | ggctctgcgt | gctcgtcccg | 720 |
| aagtgcctg | cctgggtccg | acaaggacac | tgaggatggc | agtgcctgga | agcaagatcc | 780 |
| cttccaggag | agcggcctcc | acctgagccc | cacggcggcc | gaggccaagg | agaaggctcg | 840 |
| agccatgcga | gtcaacaagc | gcgcgccaca | gatggactgg | aacagggaagc | gtgaaatctt | 900 |
| cagcaacttc | tgagccccct | cctgcctgtc | tccggaccct | gggaccccc | ccgcacggac | 960 |
| cttgggcctc | agcctgcccc | gagctcccc | agcctcagtg | gactggaggg | tggtcctgcc | 1020 |
| attgcccaga | aatcagcccc | agccccggtg | agccccatc | ctgccccctg | ccaccaggta | 1080 |
| ctgggggcct | gtggcagcaa | gataggggga | gagagaccca | gagatgtgag | agagagtcag | 1140 |
| agacagagac | agagagagag | agagagagac | acagagagag | acagagagag | agcagagcag | 1200 |
| cgcgcgccag | ccgcggggcg | agggcctttg | ctgctctgcc | ggggcctgct | gactgaaagg | 1260 |
| aattttgtgt | tttgcctttt | ttccaaaaag | atctccagct | ccacacatgt | ttccacttaa | 1320 |
| taccagagac | cccccccgtc | aaagcccccc | tccccggccc | cttgggacgc | gctctaaata | 1380 |
| attgcaataa | aacaaacctt | tctctgc | | | | 1407 |

<210> 110

<211> 1376

<212> DNA

<213> homo sapiens

<400> 110

| | | | | | | |
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| cctgccccat | cgtagtatat | gagctcgctt | acacaaggac | ccccgctaaa | agccagagct | 120 |
| ccagtcctcc | gaggcttgaa | gacggggact | cccttctcca | ccaactctgt | cctcgggggg | 180 |
| tggggcccca | cccgagatca | cagcgcgaca | ggagtggggg | tggccgctgg | agacaggatga | 240 |
| agaaacaaga | aaactaagaa | atccgagcgg | ttggaggggg | agtctgtgtg | gatgggatgg | 300 |
| ggacgcgggg | ggaggggctg | ggccgctgct | cccatgccct | gatccgggga | gtcccagaga | 360 |
| gcctggcgct | gggggaagg | gcgggggctg | gccttcccgc | tctggatctg | gccaaagctc | 420 |
| aaagggagca | cggggtgctg | ggaggtaaac | tgaggcaacg | actggggcta | cagctgctag | 480 |
| aactgccacc | tgaggagtc | ttgccgctgg | gaccgctgct | tggcgacacg | gccgtgatcc | 540 |
| aaggggacac | ggccctaata | acgcggccct | ggagccccgc | tcgtaggcca | gaggtcgatg | 600 |
| gagtcgca | agccctgcaa | gacctggggc | tccgaattgt | ggaaatagga | gacgagaacg | 660 |

| | | | | | | |
|------------|------------|------------|------------|------------|------------|------|
| cgacgctgga | tggcactgac | gttctcttca | ccggccggga | gtttttcgta | ggcctctcca | 720 |
| aatggaccaa | tcaccgagga | gctgagatcg | tggcggacac | gttccgggac | ttcggcgtct | 780 |
| ccactgtgcc | agtctcgggt | ccctccacc | tgcgcggtct | ctgcggcatg | gggggacctc | 840 |
| gcactgttgt | ggcaggcagc | agcgacgctg | ccaaaaggc | tgtccgggca | atggcagtg | 900 |
| tgacagatca | cccatatgcc | tccctgaccc | tcccagatga | cgcagctgct | gactgtctct | 960 |
| ttcttcgtcc | tgggttgcc | ggtgtgcccc | ctttctctct | gcaccgtgga | ggtggggatc | 1020 |
| tgcccaacag | ccaggaggca | ctgcagaagc | tctctgatgt | caccctggta | cctgtgtcct | 1080 |
| gctcagaact | ggagaaggct | ggcgccgggc | tcagctccct | ctgcttggtg | ctcagcacac | 1140 |
| gccccacag | ctgagggcct | ggccttgggg | tactgctggc | caggggtagg | atagtatagg | 1200 |
| aagtagaagg | ggaaggagg | ttagatagag | aatgctgaat | aggcagtagt | tgggagagag | 1260 |
| cctcaatatt | gggggagggg | agagtgtagg | gaaaaggatc | cactgggtga | atcctccctc | 1320 |
| tcagaaccaa | taaaatagaa | ttgacctttt | aaaaaaaaaa | aaaaaaaaaa | agttct | 1376 |

<210> 111

<211> 854

<212> DNA

<213> homo sapiens

<400> 111

| | | | | | | |
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| atctcttatt | tgagaagtgt | ctgttgccct | cattagggtt | aattacaaaa | tttgatcacg | 120 |
| atcatattgt | agtctctcaa | agtgtcttag | aaattgtcag | tggtttacat | gaagtggcca | 180 |
| tgggtgtctg | gagcaccctg | aaactgtatc | aaagttgtac | atatttccaa | acatttttaa | 240 |
| aatgaaaagg | cactctcgtg | ttctcctcac | tctgtgcact | ttgctgttg | tgtgacaagg | 300 |
| catttaaaga | tgtttctggc | attttctttt | tatttghtaa | gtggtggtaa | ctatggttat | 360 |
| tggctagaaa | tcctgagttt | tcaactgtat | atatctatag | tttgtaaaaa | gaacaaaaca | 420 |
| accgagacaa | acccttgatg | ctccttgctc | ggcgttgagg | ctgtggggaa | gatgcctttt | 480 |
| gggagaggct | gtagctcagg | gcgtgcactg | tgaggctgga | cctgttgact | ctgcaggggg | 540 |
| catccattta | gcttcagggt | gtcttgtttc | tgtatatagt | gacatagcat | tctgctgcca | 600 |
| tcttagctgt | ggacaaaagg | gggtcagctg | gcatgagaat | atTTTTTTTT | ttaagtgcgg | 660 |
| tagtttttaa | actgtttgtt | tttaaacaaa | ctatagaact | cttcattgtc | agcaaagcaa | 720 |
| agagtcactg | catcaatgaa | agttcaagaa | cctcctgtac | ttaaacacga | ttcgcaacgt | 780 |
| tctgttattt | tttttgtagt | tttagaatgc | tgaaatgttt | ttgaagttaa | ataaacagta | 840 |
| ttacatTTTT | aaaa | | | | | 854 |

<210> 112

<211> 1681

<212> DNA

<213> homo sapiens

<400> 112

| | | | | | | |
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| ttcagctttt | gccgaaatgg | gtagtgatca | cacacagtc | tctgcaagca | aaatctcaca | 60 |
| agatgtggac | aaagaggatg | agtttggtta | cagctggaaa | aatatcagag | agcgttatgg | 120 |
| aaccctaaca | ggcgagctgc | atatgattga | actggagaaa | ggtcatagt | gtttgggcct | 180 |
| aagtcttgct | gggaacaaag | accgatccag | gatgagtgtc | ttcatagtgg | ggattgatcc | 240 |
| aaatggagct | gcaggaaaag | atggtcgatt | gcaaattgca | gatgagcttc | tagagatcaa | 300 |
| tggtcagatt | ttatatggaa | gaagtcatca | gaatgcctca | tcaatcatta | aatgtgcccc | 360 |
| ttctaaagt | aaaataattt | ttatcagaaa | taaagatgca | gtgaatcaga | tggccgtatg | 420 |
| tcctggaaat | gcagtagaac | ctttgccttc | taactcagaa | aatcttcaaa | ataaggagac | 480 |
| agagccaact | gttactactt | ctgatgcagc | tgtggacctc | agttcattta | aaaatgtgca | 540 |
| acattctgga | gcttcccaag | gaggcagggg | ggtttgggta | ttgctatcag | cgaagaagat | 600 |
| acactcagtg | gagtcacatc | aaagagctta | acagagcatg | gggtagcagc | cacggatgga | 660 |
| cgactcaaa | tcggagatca | gatactggct | gtagatgatg | aaattgttgt | tggttaccct | 720 |
| attgaaaagt | ttattagcct | tctgaagaca | gcaaagatga | cagtaaaact | taccatccat | 780 |
| gctgagaatc | cagattccca | ggctgttcct | tcagcagctg | gtgcagccag | tggagaaaaa | 840 |
| aagaacagct | cccagtcctc | gatggtccca | cagtctggct | ccccagaacc | ggagtccatc | 900 |
| cgaaatacaa | gcagatcatc | aacaccagca | atTTTTgctt | ctgatcctgc | aacctgcccc | 960 |
| attatccctg | gctgcgaaac | aaccatcgag | atttccaaag | ggcgaacagg | gctgggcctg | 1020 |
| agcatcgttg | ggggttcaga | cacgctgctg | ggtgccatta | ttatccatga | agtttatgaa | 1080 |
| gaaggagcag | catgtaaaga | tggaagactc | tgggctggag | atcagatctt | agaggatga | 1140 |
| ggaattgact | tgagaaaggc | cacacatgat | gaagcaatca | atgtcctgag | acagacgcca | 1200 |

| | | | | | | |
|------------|------------|------------|------------|------------|------------|------|
| cagagagtgc | gcctgacact | ctacagagat | gaggcccat | acaaagagga | ggaagtgtgt | 1260 |
| gacacctca | ctattgagct | gcagaagaag | ccgggaaaag | gcctaggatt | aagtattgtt | 1320 |
| ggtaaaagaa | acgatactgg | agtattttgt | tcagacattg | tcaaaggagg | aattgcagat | 1380 |
| gccgatggaa | gactgatgca | gggagaccag | atattaatgg | tgaatgggga | agacgttcgt | 1440 |
| aatgccaccc | aagaagcggg | tgccgttttg | ataaaagtgt | ttccctaggg | cacagttaac | 1500 |
| cttgggaagt | tgggaaggat | tcaaagctgg | gtcccgttcc | gtttcaggag | gagggagggc | 1560 |
| cgtttttcaa | aggcagccca | gggttgagtt | tgaaggggca | gcctctttcg | tcttttttca | 1620 |
| cgtttttccc | acttttttgg | ggatccccgt | ttacattttg | agttccactt | ggggaagtta | 1680 |
| g | | | | | | 1681 |

<210> 113
 <211> 852
 <212> DNA
 <213> homo sapiens

<400> 113

| | | | | | | |
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| ggcaatttcc | gttaggtgct | gaaggctgtg | gcgcgcggct | gtccccattc | ccacgtgaag | 60 |
| cgctacgcta | gcacgcgtcg | gctggcggct | cccagctcgc | cgcggagcag | tccccgcagc | 120 |
| agcgggggac | cgggaagtggc | tcgcggaggc | tcagaagcta | gtcccggagc | ccggcgtgtg | 180 |
| gcgcctcgga | gcacggtgac | ggcgccatgt | ccctaattctg | ctccatctct | aacgaagtgc | 240 |
| cggagcacc | atgtgtatcc | cctgtctcta | atcatgttta | tgagcggcgg | ctcatcgaga | 300 |
| agtacattgc | ggagaatggt | accgacccca | tcaacaacca | gcctctctcc | gaggagcagc | 360 |
| tcacgcacat | caaagtgtgct | cacccaatcc | ggcccaagcc | tcctcagcc | accagcatcc | 420 |
| cggccattct | gaaagctttg | caggatgagt | gggatgcagt | catgctgcac | agcttcactc | 480 |
| tgcgccagag | ctgcagacaa | ccgcccaaga | gctgtcacac | gctctgtacc | agcacgatgc | 540 |
| cgcctgccgt | gtcattgccc | gtctcaccaa | ggaaactgtg | aaggggatgg | gcaggagggc | 600 |
| ttgtgcagg | ttttgtaagc | agtgatctag | tttcattaaa | aaaagaaaac | aataaaaaag | 660 |
| ccctgcacaa | ggcctacagc | ccctctccct | tcctgtcggt | caatggacgt | ggtggtggct | 720 |
| gttccacacc | cattttgttg | cagttcctgt | gagacaggag | aggctgagcc | aagggaactg | 780 |
| tgaaggggat | gggcaggagg | gcttgtgcag | ggttttgtaa | gcagtgatct | agtttcatta | 840 |
| aaaaaagaga | ac | | | | | 852 |

<210> 114
 <211> 1739
 <212> DNA
 <213> homo sapiens

<400> 114

| | | | | | | |
|------------|-------------|------------|-------------|------------|-------------|------|
| gaagcccggg | gcctggcgac | gcgcacgcgg | agcggagcgg | cagcgcacgc | gggcgatcgc | 60 |
| ttcacggatg | cggacgacgt | agccatcctt | acctacgtga | aggaaaatgc | ccgctcgcgc | 120 |
| agctccgtca | ccggtaacgc | cttgtggaaa | gcgatggaga | agagctcgct | cacgcagcac | 180 |
| tcgtggcagt | ccctgaagga | ccgctacctc | aagcacctgc | ggggccagga | gcataagtac | 240 |
| ctgctggggg | acgcgccggg | gagccctctc | tcccagaagc | tcaagcggaa | ggcggaggag | 300 |
| gaccgggagg | ccgcggatag | cggggaacca | cagaataaga | gaactccaga | tttgccctgaa | 360 |
| gaagagtatg | tgaagggaag | aatccaggag | aatgaagaag | cagtcaaaaa | gatgcttggt | 420 |
| gaagccaccc | gggagtttga | ggaggttgtg | gtggatgaga | gccctcctga | ttttgaaata | 480 |
| catataacta | tgtgtgatga | tgatccaccc | acacctgagg | aagactcaga | aacacagcct | 540 |
| gatgaggagg | aagaagaaga | agaagaaaaa | gtttctcaac | cagaggtggg | agctgccatt | 600 |
| aagatcattc | ggcagttaat | ggagaagttt | aacttggatc | tatcaacagt | tacacaggcc | 660 |
| ttcctaaaaa | atagtgggtga | gctggaggct | acttccgcct | tcttagcgct | tggtcagaga | 720 |
| gctgatggat | atcccathtt | gtcccagaaa | gatgacatag | atttgcaaaa | agatgatgag | 780 |
| gataccagag | aggcattggg | caaaaaat | ggtgtctcaga | atgtagctcg | gaggattgaa | 840 |
| tttcgaaaga | aataattggc | aagataatga | gaaaagaaaa | aagtcattgg | aggtgaggtg | 900 |
| gttaaaaaaa | attgtgacca | atgaacttta | gagagttcct | gcattggaac | tggcacttat | 960 |
| tttctgacca | tcgctgctgt | tgctctgtga | gtcctagatt | ttttagacca | agcagagttg | 1020 |
| tagaggggga | taaaaagaaa | agaaattgga | tgtattttaca | gctgtccttg | aacaagtatc | 1080 |
| aatgtgttta | tgaagggaag | atctaaatca | gacaggagtt | ggtctacata | gtagtaatcc | 1140 |
| attgttggaa | tggaaacctt | gctatagtag | tgacaaagtg | aaaggaaatt | taggaggcat | 1200 |
| aggccatttc | aggcagcata | agtaatctcc | tgctcctttg | cagaagctcc | tttagattgg | 1260 |
| gatagattcc | aaataaagaa | tctagaaata | ggagaagatt | taattatgag | gccttgaaca | 1320 |
| cggattatcc | ccaaacctt | gtcatttccc | ccagtgaact | ctgatttcta | gactgctttg | 1380 |

| | | | | | |
|-------------|-------------|------------|------------|------------|----------------|
| aaaatgctgt | attcatttttg | ctaacttagt | atttgggtac | cctgctcttt | ggctgttctt1440 |
| tttttggagc | ccttctcagt | caagtctgcc | ggatgtcttt | ctttacctac | ccctcagttt1500 |
| tccttaaaac | gcgcacacaa | ctctagagag | tgtaaagaat | aatgttactt | ggttaatgtg1560 |
| ttattttattg | agtattgttt | gtgctaagca | ttgtgttaga | tttaaaaaat | tagtggattg1620 |
| actccacttt | gttggtgttg | tttcattgtt | gaaaataaat | ataactttgt | attcgaaaaa1680 |
| aaaaaaaaaa | aaaaaaaaag | gaggagaaaa | agaggggaaa | gggggaagag | gagcaaaga 1739 |

<210> 115
 <211> 805
 <212> DNA
 <213> homo sapiens

<400> 115

| | | | | | |
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| accaactgaa | aaaaccggaa | gggatggaag | cagcggatca | tctcgcgata | tctggagcgt120 |
| ctgcgcctgc | cttcctgacc | tgggacttgt | ttccagctct | cgcgagactt | tcaggggtcg180 |
| gagcgcgggg | gccggccgag | aggaaagctg | gaggcgcggg | tggggaacat | gtctgagtcg240 |
| gagctcggca | ggaagtggga | ccggtgtctg | gcggatgcgg | tcgtgaagat | agaatcctgg300 |
| taattgatgt | ccacccgaga | aatccctgca | gatgttccag | cctctgtcta | gtccagatag360 |
| ccacaggaag | ggtaactgggt | ttggattagg | aattgttttc | tcacttacct | tctttaaaag420 |
| aagaatgtgg | ccattagcct | tcggttctgg | catgggatta | ggaatggcct | attccaactg480 |
| tcagcatgat | ttccaggctc | catatcttct | acatggaaaa | tatgtcaaag | agcaggagca540 |
| gtgacttcac | ctgagaacat | cccagcggga | ggacaagaga | aatcatgttt | attcctcagg600 |
| aatactgaag | tgccctggag | taagctgcca | ttcttctgta | acaatgttat | cagtaatgct660 |
| ttaaactcca | gcacctgggt | atgcatttga | aaccaagtct | gtttcttgtt | ttgtattttc720 |
| tctctggaag | ttgtaaggag | gtggtcttaa | ataaattaaa | caaaaatagg | aagtccaaaa780 |
| aaaaaaaaaa | aaaaaaaaaa | aaaaa | | | 805 |

<210> 116
 <211> 1483
 <212> DNA
 <213> homo sapiens

<400> 116

| | | | | | |
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| tgaaaaagac | ccaacgccaa | cacctggtgc | cttttgcage | cagcgcaccac | ccatccgtgc 60 |
| ccggaccctt | gggaatgccc | gcggctccag | aggaaaaagc | ccagggacgg | ggcctccgtt 120 |
| gcgggggggtc | ggctgcttct | tgggaacttt | gtcgtttccg | gcgctggctg | gctgggtggc 180 |
| tgtaaagcac | tgaagccccc | cggccgccaa | cccctgaaag | cagaacctgg | cctccctggc 240 |
| cacagcagcc | ttaccacccg | ctctacgtgt | cccgggcaact | tcccgcagcc | ttcccgctccc 300 |
| tttctcatcg | gccttgtagt | tgtacagtgc | tgttggtttg | aaaagggtgat | gtgtggggag 360 |
| tgcggctcat | cactgagtag | agaggtagaa | tttctattta | accagacctg | tagtagtatt 420 |
| accaatccag | ttcaattaag | gtgatttttt | gtaattatta | ttatttttgt | gggacaatct 480 |
| ttaattttct | aaagatagca | ctaacatcag | ctcattagcc | acctgtgcct | gtccccgcct 540 |
| tggcccggtc | ggatgaagcg | gcttccccgc | agggccccca | cttcccagtg | gctgcttctc 600 |
| ggggacccag | ggcaccocgg | caccttcagg | cacgctcctc | agctggtcac | ctcccggtct 660 |
| tgccgttcag | atggggctcc | tgaggctcag | gagtgaagat | gccacagagc | cgggctcccc 720 |
| taggctgcgt | cgggcattgt | tgggaagctgg | cctgccagga | ccttccaccc | tggggcctgt 780 |
| gtcagccgcc | ggccctccgc | accctggaag | cacacggcct | ctgggaagga | cagccctgac 840 |
| cttcggtttt | ccgagcacgg | tgtttcccaa | gaattctggg | ctggcggcct | ggtggcagtg 900 |
| ctggagatga | ccccgagccc | ctccccgtgg | ggcaccacag | agggccctgc | cggaatgtgc 960 |
| agcctgtggg | tagtcggctg | gtgtccctgt | cgtggagctg | gggtgcgtga | tctggtgctc1020 |
| gtccacgcag | gtgtgtggtg | taaacatgta | tgtgctgtac | agagagacgc | gtgtggagag1080 |
| agccgcacac | cagcgccacc | caggaaaggc | ggagcggtta | ccagtgtttt | gtgtttattt1140 |
| ttaatcaaga | cgtttccctt | gttttccctt | aaatttgctt | cgtgtaagca | gtacataag1200 |
| gaccttcctt | tggtgaaatc | cgggttcgaa | tgaatatctc | aaggcaggag | atgcatctat1260 |
| tttaagatgc | tttgagagcag | acagcttttag | ccgttcccaa | tccttagcaa | tgccttagct1320 |
| gggacgcata | gctaataactt | tagagaggat | gacagatcca | ttaaagagag | aaagataaga1380 |
| gaaaatgtct | aaagcatctg | gaaaggtaaa | aaaaaaaaaa | tctatttttg | gacaaatgtal1440 |
| attttatccc | ccatgggatg | cttggttatg | gcggggggga | ggc | 1483 |

<210> 117

<211> 1347
<212> DNA
<213> homo sapiens

<400> 117

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agccagagat tttgtgtggc tgctaaaatg cttacatctc tggctatgaa agggacttca 120
tgaccatcca gtccaatata acacttgacg acagagaaac tgaggtcttc catgacttgc 180
ctagtctccc agctagtgtg aggcaaaact ggattccac tctggtattc tttcttccct 240
ttacatcatt ttccctcctt tataatgtcc tgagagacca gaactcacac cagaatcgat 300
tattcctcag gtgaagcata gactctttca tggtagacag atttcacgac tcagagatag 360
aaatctcttg ctatcatcag gtcacgggca gctcctgtgg agtcctgccc aacttatgtg 420
gcttccataa aatggcaaca gtccaggctc cttgcctaata tttagagcat taactcccta 480
attgccagta agcaaggagg tggatctctg caaacctaca ctgtctatga cagctctagt 540
tgtacttggg gtgactaaat acctcaaagg caacctgctt ctgcagggtt tgaagtgtca 600
gcttcataag acactgaggt ttagaattgt ttgattctag accataactg aagggcataa 660
atggaaacag gatatgaagg gaaacaagta gcatcatgga gctgaaaagt ggtgcatcac 720
ccaatggcta gcacaaacaa ggatcacact gtccattctc ttgtctgcta aattaagcat 780
tttcttgccc cctttgtctc atcttttcac aacagctgga tagagggatc agaaatgact 840
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tgaggactgca actcatgact atcctgatat tgggaagaaag gactttgtta atcttctccc1020
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acaatgagat gaagacaata tagaagtccg catagtcac ataatcccgt tccttggccg1200
gttgaggcag ctcatgtggc gagcccagtc aagccaaccc gcagcttcac tcacgacttc1260
aagatttgat gctaattctt ttggatttct acagttatta aataagtgtc tgagtggaaa1320
aaaaaaaaa aaaaaaaaaa aaaaaat 1347
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<210> 118
<211> 1683
<212> DNA
<213> homo sapiens

<400> 118

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acaagacaga ccacatcgac gctgacctt cagtcacgac gcaggccttc atcgacgcct 180
gctccatctc tgacctgcag ctgggcaagg attcgccaa caacaagctc ctctacgcca 240
aggagattcc tgagtaccgg aagatcgtgc agcgctacta caagcagatc caggacatga 300
cgccgctcag cgagcaagag atgaatgcc atctggccga ggagtcgagg aaataccaga 360
atgagttcaa caccaatgtg gccatggcag agatttataa gtacgccaag aggtatcggc 420
cgcagatcat ggccgcgctg gaggccaac ccacggcccc gaggacacaa ctgcagcaca 480
agtttgagca ggtggtggct ttgatggagg acaacatcta cgagtgttac agtgaggcct 540
gagacacatg gagagtggg caggctgctg ctgggagaaa tggacgcca ctgggcctca 600
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gggcggggggc aggaggagg gctgctctct gagacagggg cggccccgcc ttgacctctg 720
ggcacctcca tcccctccca cctgtcccca gatcagctct tgggatggag gccagagagc 780
tggtcaggct ccccatctg cccagcacgg cctgcactgt gcccaccac ttgctccaca 840
acgtccagtt ggtcctgctg ccaagagccc cgtgcatcca ggcggccaag caccactgg 900
gggagaggag gccgccagcc cggaggctgc agcccagaaa ctctacctca tccacactgg 960
tgcagggagc cctccttgaa ctgacctttg attggtttct gcttcaacta ccaaatgtt1020
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gatttttggg gtttggcggt ctgttggtag agtgggcagt gcccgcgcca tggggtgctc1140
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ttaaaaaacg tatcatgcac caactgtgaa tagctgccgc ttgcgcagag gaccggggga1380
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ctggcagagc gcccctggcg cctgagacta ccaccactc cgttcctgcc agaaacgacc1500
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```

| | | | | | |
|------------|------------|------------|------------|-------------|----------------|
| ctcagagccc | atgggggctg | gaggggggca | gctgggactc | tggaatcttc | tttataataa1620 |
| aagccttacg | gacaaaccta | aaaaaaaaaa | aacaagacaa | gagaggggaaa | gggaaagaag1680 |
| ggg | | | | | 1683 |

<210> 119
 <211> 1355
 <212> DNA
 <213> homo sapiens

<400> 119

| | | | | | | |
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| atcggacttc | gacgcccgt | ggtgacgcac | acgctgcgcc | ggaagtgtga | acacaaagcc | 120 |
| tccaggcttt | gtcatggcgg | ctgctgctgc | acgctggaac | catgtgtggg | tcggcaccga | 180 |
| gactgggatc | ttgaaagggg | taaactcttc | gcgaaaacag | gcggcgaaact | tcacggccgg | 240 |
| aggacagccg | cggcgcgagg | aggcagttag | cgccctgtgt | tggggcaccg | gcggcgagac | 300 |
| ccagatgctg | gtgggctgcg | cggacaggac | ggtgaagcac | ttcagcaccg | aggatggcat | 360 |
| attccagggt | cagagacact | gcccgggagg | ggagggcatg | ttcgtggcc | tcgcccaggc | 420 |
| cgacggcacc | ctcatcacat | gtgtggattc | tgggattctc | agagtctggc | atgacaagga | 480 |
| caaggacaca | tcctctgacc | cactcctgga | actgagagtg | ggccctgggg | tgtgtaggat | 540 |
| gcgccaagac | ccagcacacc | cccatgtggt | tgccacaggt | gggaaagaga | atgctttgaa | 600 |
| gatatgggac | ctgcagggct | ctgaggaacc | tgtgttcagg | gccaagaacg | tgcggaatga | 660 |
| ctggctggac | ttgcgggttc | ccatctggga | ccaggacata | cagtttctcc | caggatcaca | 720 |
| gaagcttgct | acctgcacag | ggtaccacca | ggtccgtgtt | tatgatccag | catcccccca | 780 |
| gcgcccggcca | gtcctagaga | ccacctatgg | agagtaccca | ctaacagcca | tgaccctcac | 840 |
| tccgggaggc | aactcagtga | ttgtgggaaa | cactcatggg | cagctggcag | aaattgacct | 900 |
| tcggcaaggg | cgtctactgg | gctgtctgaa | ggggctggca | ggcagtgtgc | gtgggttgca | 960 |
| gtgccaccct | tcaaagcctc | tactagcctc | tagtggcttg | gacagagtct | tgaggataca1020 | |
| caggatccag | aatccacggg | gtctggagca | taaggtttat | ctcaagtctc | aattgaactg1080 | |
| cctcctcttg | tcaggcaggg | acaactggga | ggatgagccc | caagagcctc | aagaacccaal1140 | |
| caaggtgccc | ctagaagaca | cagagacaga | tgaactttgg | gcataccttg | aggcagctgc1200 | |
| caagcggaag | ctctcggtt | tggagcagcc | ccaaggagct | ctccaaacga | gacggagaaa1260 | |
| gaagaagcgg | cctgggtcca | ccagcccctg | acgcccctgt | gcccactttg | taaataaact1320 | |
| gctgaacacc | caaaaaaaaa | gaaaaaaaaa | agggg | | 1355 | |

<210> 120
 <211> 1816
 <212> DNA
 <213> homo sapiens

<400> 120

| | | | | | | |
|------------|------------|------------|------------|------------|----------------|-----|
| ggtcagagag | attctgaaaa | gtaatccaaa | gtgttccgta | gctaaacatg | gtgcaggctc | 60 |
| gttgtaccac | tgcaaccgac | tgacgttact | gtagttccta | gaatgctgtg | agggcggggg | 120 |
| gttcagatca | acataaagcc | taacttgctg | gagttgtagt | ctcaaggctt | tctctcttgc | 180 |
| ttactaaaa | cctaaggacc | actgtttttg | gtagcaatta | tatggttact | atccactgca | 240 |
| gtcctcagtt | gttggggtaa | atcccacatg | gcagagtaag | gcacccca | gaaattaact | 300 |
| tggagagcct | gagaaattcc | cagtggcctt | ggcatagctg | tctagaacac | catctctagg | 360 |
| aaaattta | tctgtccctg | gccagctatt | gttcttccac | ttcgttttct | gctgtcccaa | 420 |
| ggccagatga | gtggaatcac | catctgactg | ttgtcaataa | aatgtatctg | gcgtgaacag | 480 |
| caggataacc | catgttctcc | acataaggat | aaccttacgt | gaaaccttcc | tgctgacaac | 540 |
| catgcagagg | aatttttcca | cttaagtcag | agccttcctc | cccatctgga | attcacagct | 600 |
| gttccctggc | agcacacagg | agggtattaa | ggacctttgt | gaggctaggt | acactgtcca | 660 |
| cacctctttg | gggaagttac | gatttttttt | ttccatcata | attcagtctc | ttcttattct | 720 |
| acagtgtgca | ctttatgcct | ctcgcctttt | gataatagtt | gttcagtga | ggaagtcagc | 780 |
| tgcagaata | ttaagaaggg | tctcccttta | tgtcagtaca | actgttaggg | cggccttccc | 840 |
| atttacttta | ggtttcaaga | ggattcaccg | gaagcacatg | ccccggtcta | gtcccatttg | 900 |
| aaacagttct | gctttactga | gaccctaggc | cggctctcct | gctgacccta | gcgctgctgc | 960 |
| ctaggtgcca | tttcccttcc | tcctcagtca | aatacaggct | gcacattttg | tcacttaatg1020 | |
| ccagtacaat | ctgtgttact | cctaaggact | tttgggattt | tgatgagacc | tgcgagggag1080 | |
| aagacactga | gaagccagtg | atctgcaagc | atttgctctt | gtttccacat | cacctctggg1140 | |
| atatttcagc | tgttgtttcc | aatggcaaa | tcataacta | aaagcacttg | tttcaagttt1200 | |
| tgttctgcac | tcccacgact | gaagttgtag | attgagctga | ataaccatgg | gaagtgacca1260 | |

```

agcaaagaca ctcgattgga gtcagttgaa tatttgtacc ctcagtggag cccttctggt1320
cttttcttcc acttctgcag aatttcctct agcaaatact tctttctcct tgcttgcctc1380
caccatgata tttgaataag agatggccag aggataacac ttgtctctta aaaactaagc1440
taaaaagaac ctagaacctt caattgagca gttgtgaaaa ttgctaattg tgccaaggcc1500
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ttgtgaggaa cacagcaacg gaaatccatc cacaaaggat gcagtgcccc aacttgact1680
gcgcctgaat agtcatgtga taatttactg aagaaatcta gtgtacttta aatTTTTTt1740
ataaaagttt acattgtatt gtaggttaac attaaatgtt ttatagcaaa aacttcaaaa1800
aaaaaaaaa aaaaaaa
1816

```

<210> 121
<400> 121
000

<210> 122
<400> 122
000

<210> 123
<211> 740
<212> DNA
<213> homo sapiens

<400> 123

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cttcacaccc atttctttaa aaaggatccc gtagcaggca gaaaagcccc ttccatcctg120
ctcctctgat actgtgcccc ctgggagata tttcgtcct ccaccacgt gtctgtggct180
ggaactgccc agcctgctcc tggccccctg gaagcctccc cacagctggt aatctggact240
taaggattgc tgggccaccg cctctctgcc taccaccatt ccataattta gtggagcccc300
tacgtagaaa ggccccgggg ctttatttta gtctcctttt cagggatgtc gtgggccccg360
gaggggggtt ttggtgctac agcctctccc ccaccctaa agggacgccg acgtgtttg420
ctgccttcac cacatattag tgcttgacct tggcagggga ccccatggaa aagatgggga480
agagcaaaat acatggagac gacgcaccct ccaggatgct cgctgggatt cccacgcca540
ccactgtccc ccaccccatg gctgggaggg gcctctgaac ggaacagtgt cccacagag600
cgaataaagc caaggcttct tcccaaaaaa aaaaaaaaaa aaaaaaaaaa aagataggtt660
agttaaggcg gccgaaagtt ttttccctt tagtaagggt tagtttttag tttgggggtg720
gccttcggtt ttaagaacgt
740

```

<210> 124
<211> 1493
<212> DNA
<213> homo sapiens

<400> 124

```

aacacctgcc ctcgttcagc gctttaggga gggcggtcca ggcgccccgg agcaggcaga 60
gtgctgtggag ctgctgctgg ccctgggcca gcctgcggag gagctgtgct aggagttcct 120
ggcgcacgcc cgcggccggc tggagaagga gctgagaaac ctggaggccg agctggggcc 180
ctcacctccg gctcccgacg tgtagagtt caccgaccat ggaggcagt gcttcgtggg 240
cggcctctgc cagggtggcg cggcctacca ggagctgttt gcggcccagg gccagcagg 300
tgccgagaag ctggcggcct tcgccccgca gctgggcagc cgctattttg cgctggtgga 360
gcggcggtcg gcgcaggagc aggggtggtg tgacaactca ctgctggtgc gggcgctgga 420
ccgcttccac cggcgcttgc gggtcccgg ggccctgctg gccgctgccg ggctcgaga 480
cgctgccacg gagatcgtgg aacgagtggc ccgcgagcgc ctgggccacc acctgcagg 540
tctccggcg cgcttcctgg gctgcctgac agacgtccgc caggcgctgg cagcacctcg 600
cgtggctggg aaggagggcc ctggcctggc cgagttgctg gccaatgtgg ccagctccat 660
cctgagccac attaaggcct ctctggcagc agtgcacct ttcaccgcca aagaggtgtc 720
cttctccaac aagccctact tccggggtga gttctgcagt cagggtgtcc gtgaggccct 780
catcggtggc ttcgtccact ctatgtgcca gacggctcag agcttctgct acagccctgg 840
ggagaagggg ggtgccacac cacctgcctt gctcctgctg ctctcccgcc tctgcctgga 900
ctacgagacg gccaccatct cctacatcct cactctcact gatgaacagt ttctggtgca 960

```


| | | | | | |
|------------|-------------|------------|------------|------------|----------------|
| ggatcagttc | ccagtgacgc | ccgtgagcac | gctgtgtgca | gaggccaggg | aaacggcgcg1020 |
| gcggctgctg | accactacg | tgaaggtgca | gggcctgggc | atatcacaga | tgctgcgcaal080 |
| gagcgtggag | actcgcgact | ggctcagcac | tctggagccc | cggaatgtgc | gggccgtcat1140 |
| gaagcgggtg | gtggaggata | ccaccgccat | cgacgtgcag | gtggggctcc | tgtacgaaga1200 |
| gggtgttcgc | aaggcccaga | gcagcgactc | cagcaagagg | actttctccg | tgtacagcag1260 |
| ctctcggcag | cagggccgct | acgccccag | ctataccccc | agtgccccga | tggacaccaal320 |
| cctcttgagc | aatatccaga | agctattctc | tgaacgtatt | gatgtgttca | gccctgtgga1380 |
| gttcaacaag | gtgtcgggtgc | tgaccggcat | catcaagatc | agcctgaaga | cgcttgctgg1440 |
| gagtgtgtgc | gggctgcgaa | cctttttggc | cctttgcggg | cttcaacaag | ggg 1493 |

<210> 125
 <211> 250
 <212> DNA
 <213> homo sapiens

<400> 125

| | | | | | |
|------------|------------|------------|-------------|------------|---------------|
| ccagactgaa | ttgtcagtga | gcggatctga | gggcgggtgtg | gagtggccag | tggggcttgg 60 |
| ccgagatgga | caaccggatt | ccttatgatg | actagccggg | ggtttcttgc | ctgcctatga120 |
| gaatcctcca | gcatggaatc | ctcctcatga | gagggtacac | agccggacta | caacgatgag180 |
| ttgacccagt | tttgggccga | accatcacac | tgaagaagcc | tcctggagtc | attgggatta240 |
| agatcgaggg | | | | | 250 |

<210> 126
 <211> 1202
 <212> DNA
 <213> homo sapiens

<400> 126

| | | | | | |
|-------------|-------------|------------|------------|-------------|-----------------|
| tccggggggag | cggcgcgggcg | gcgcgggagt | tggttctaaa | gagtgggtgag | tcagaagaga 60 |
| cgtcaggcag | caagcgactt | gggccatggc | ctctgacctc | gacttctcac | ctccggaggt 120 |
| gcccagagccc | actttccttg | agaacctgct | acggtagcga | ctcttccttg | gagccatctt 180 |
| ccagctcatc | tgtgtgctgg | ccatcatcgt | acccattccc | aagtcccacg | aggcggagggc 240 |
| tgaaccgtct | gagcccagaa | gtgctgaggt | gacgaggaag | cccaaggctg | ctgttccttc 300 |
| tgtgaacaag | aggcccaga | aagagactaa | gaagaagcgg | tagaagagga | ggcctgagga 360 |
| gctgggcggg | cagggagagg | gtcttgggga | cagccctcct | gggaatctac | attgtgttcc 420 |
| cccgcattcc | aggctcaggg | tctgaggagg | ctgtgacgcc | ctatgaccgc | agagatctag 480 |
| acagtcgtaa | cagtcgccag | gctccagctg | ggcaatccac | cacttcctct | tccttctgct 540 |
| tctgtgacgg | tttagagtca | agggggctga | aacacactgt | gagcatagac | tgtattaggt 600 |
| ttgttcagaa | gccgggtcag | ctcacagagt | cacattttct | tgcttagtca | tgtgtccctc 660 |
| cttgagttgc | cccctccttg | tgggtttaca | ctacattttg | gagtcattgt | ctaattgctga 720 |
| caagcacacc | ctctcccatt | atttgtgcac | tacagatctc | ctgctgatca | gtcacctttg 780 |
| ttgctgctgt | gtagacagag | ccaggcctca | cctgtttgtt | taggccaaaga | tgccatggac 840 |
| atgcagcgtt | agtgatccca | ctagctgtga | cagccaggcc | cagaaaatgc | ctggcgtgag 900 |
| agccagcaga | cagccaggcc | aggggtaggg | agtgcctgct | tctgtcccat | caggtgcagg 960 |
| ggatttggct | gaaggcgtgc | atatttcctg | ggcacaaact | tcctgagcct | ctgaaatggg1020 |
| aggctcgta | atttcagacc | aacctctttt | caacccatca | tagcacgttc | aagggtgtgcc1080 |
| ttttacttct | acctgtacat | cccccatccc | ttcaattctt | tcattccctg | accagtgaga1140 |
| gggttccttg | gggaagtatg | gtgaataaac | tgacatgcat | gcttcagaaa | aaaaaaaaaa1200 |
| aa | | | | | 1202 |

<210> 127
 <211> 1014
 <212> DNA
 <213> homo sapiens

<400> 127

| | | | | | |
|------------|------------|------------|-------------|------------|----------------|
| cccttttttt | ttctttttga | gatgggggga | aagtcctagc | aaaaggcagg | agtttagcatt 60 |
| ttcctttaac | aagactttct | aatgctaaac | aaagaccaac | ttctttttaa | aggggttgtt 120 |
| ttggttgtgg | gtgaaaaata | ctgtactgta | atgatctgct | tggtttttaa | gcaaaagaga 180 |
| tcctgacatg | tgaaccaaat | acaccaaatt | gcccaagtcca | caaatgaaca | aaacaagtgc 240 |

| | | | | | | |
|------------|------------|------------|------------|------------|------------|------|
| ttaaaaaaaa | aattcttctg | ctcttatatt | tttggaggaa | gctgctgatt | ttggctgtca | 300 |
| gatttcactt | agaaatggtc | actttctgag | atgctttttc | ctcacagaat | ctgtagataa | 360 |
| actcattaaa | agattgtccc | atttcaaaat | cacccccaa | tctagcagca | ctgttttttt | 420 |
| tttttttagt | ttttgtttta | aaattacaaa | ccaagtaaga | agtccaacat | cctcttccat | 480 |
| gaacagcttt | gtgacagagc | tcctgagtg | gtgcagcccc | cactgtgctc | tgaatacagt | 540 |
| ctctgcagct | ccagtgtgtc | ctcttttcag | gaaggaaagc | atattcaata | cattcactat | 600 |
| ctgtaccccc | tggaaacttg | acatgctgac | gagctattat | aagccaactc | atccccagct | 660 |
| ctcttcggg | actggtcacc | ccttgtaaaa | ccattctgta | taagttctct | ttgaaatttc | 720 |
| tgatcttgag | cagcatattc | agaaagttca | gattccaccg | ccggaggagg | aatgtttgga | 780 |
| ataaatttag | aaaatagagt | tggagccatc | tgaaccact | ctggtctgag | ggtatacagg | 840 |
| cctttcaca | tatttgccat | agttgaaggt | gtgacctgaa | atggtgttga | ctgggcttct | 900 |
| aaaagtaag | gcattagggc | gtaaatgtgc | ttttctgcaa | catgttccgt | aaacagcttt | 960 |
| ataagggcac | ctttaagccc | gggtaagctg | gtccatggga | acctatcggt | tttg | 1014 |

<210> 128
 <211> 1171
 <212> DNA
 <213> homo sapiens

<400> 128

| | | | | | | |
|------------|-------------|-------------|-------------|-------------|-------------|------|
| caccaaatta | atcaggttta | cagacagggg | cccaccggta | ttcacattct | tgtagtgat | 60 |
| cagatgggtc | agaattttca | agatgagagt | tggtttttat | tctccacagt | aaaagctgaa | 120 |
| agtagtgatg | gcacccacat | aattttgaaa | tgatgtctta | tatagactga | actgtattca | 180 |
| gtaccaata | gtcacgctta | aaagtgtgtg | aagactgaat | ccaagaagtc | ttgggattgg | 240 |
| attttaccat | atgaaatgtt | tcatattgaa | aacacaagat | gacctttcta | atgagctgta | 300 |
| tgagaggtga | atctcctcac | tgctactgcc | atagccaagc | atcctcatga | gagtgagcac | 360 |
| atcggcacag | catgcatcca | gctctggagg | ccacgggtgca | ggcatagctg | cctgctgctc | 420 |
| tggcagaggc | cagtaaatac | agttcctaga | agcagccttt | gctgtctttt | tacactgtat | 480 |
| gcggtttggg | aatgaatgta | gaaacttact | gtgggcattt | acctttctgt | gccagtttgg | 540 |
| cttttattgc | ctgaacctta | tgctgacctg | gagaggagat | gggggacagt | gctgttggtg | 600 |
| ggccagcagt | gaatctgtat | gcggagagtt | gtgttggtgt | gatgtggccg | ttggtgggtc | 660 |
| ggtaagaggc | tcggcacctt | cttgggaagaa | atcatgtctg | aggggtgtacg | tttgatatga | 720 |
| tcatgccaga | ttggagaaga | tccaagccag | gaagatgggc | ttgaagcaaa | ctgcattatc | 780 |
| aggagtacct | tgggtgagagg | atcagtgtaa | atcctaatag | gtacaaaagac | ttttgtgttt | 840 |
| tggctttgtc | acagattttat | tgaaaaactt | ttttgcttct | gcttccattt | ttagcatttt | 900 |
| agttttctgt | tttcattttt | ggagattcct | tgctttttaa | actcgtgggt | tttctctcat | 960 |
| tttcttccct | ctctccctcc | atctctgacc | acccccacc | taacccccca | ccccccaccat | 1020 |
| cctattaaac | attttttaaag | ccctacccca | gacattggga | aatagggtgga | cccaagtagg | 1080 |
| gggggaggaa | agtattgatt | tgtttggtata | ggcttggtgga | ttagggtgtt | aaggggttct | 1140 |
| tggattatgg | aacaagggtg | aatttttttt | g | | | 1171 |

<210> 129
 <211> 353
 <212> DNA
 <213> homo sapiens

<400> 129

| | | | | | | |
|-------------|------------|------------|------------|-------------|-------------|-----|
| ggccggggacg | cagggcaaa | cgagccatgg | ctgtctacgt | cgggatgctg | cgccctgggga | 60 |
| ggctgtgcgc | cgggagctcg | ggggtgctgg | gggcccgggc | cgccctctct | cggagttggc | 120 |
| aggaagccag | gttgaggggt | gtccgcttcc | tcagttccag | agagggtggat | cgcattggtct | 180 |
| ccacgccccat | cggaggcctc | agctacgttc | aggggtgcac | caaaaagcat | cttaacagca | 240 |
| agactgtggg | ccagtgcctg | gagaccacag | cacagagggt | cccagaacga | gaggccttgg | 300 |
| tcgtcctcca | tgaagacgtc | aggttgacct | ttgcccaact | caaggaggag | tgg | 353 |

<210> 130
 <211> 205
 <212> DNA
 <213> homo sapiens

<400> 130

```

cggctgagcg gccccgcagc caacccccga ggagcggccg gctggcggtgc cgctggcgcc 60
caggagttag ggatgtccta caaacccatg cggccctggc tgcccagcag cacccttg120
tctgccaggc acccctggg gcccggggca ccccggttcc ctgacagga ggcgtgcgcg180
tgcgccgtgc ggggctgcag tgtcc
205

```

```

<210> 131
<211> 211
<212> DNA
<213> homo sapiens

```

```

<400> 131

```

```

aaatcacctt acaaccatt tctcagaaca tgtttctatt gttaaacaac acacaactat 60
tttatttatg tgttttattt atgcctgatc accaatatca ataactgaaa cacagcagtt120
tagtaataat ttaatacaca ccataacctg cctattgaga atggcattat atttgttttc180
attgtagtgg ctccatccaa aataaaatga t
211

```

```

<210> 132
<211> 867
<212> DNA
<213> homo sapiens

```

```

<400> 132

```

```

gtcttcccaa gatggagatg ctaacgaaac tgagaagggg gcgtatgttt gacgaagggt 60
tgtgcaagtc aggcccttct ggaacacagc agggcctaca acgagggggc tttgcgatgg120
gctgtgagga tgggggtggt gggaagaatt ggccacgtta gagaccccat gccacccac180
catggtgagt gctctgtgcc tcctgctcac ctgtggtgag tgggcgagct gggcgagctg240
ggcgagctgg gctggggaga gcctgtgagg accgagagga gaaatgagaa gaaggaacaa300
aaatattatt tctatgtaat ttatatTTTA cttatgccaa attatttatg ataatttgcc360
attgctatac tgtaccagtg tcaaatgctg cagcctgcc aagctgtgatt ttgtgaggct420
tgtccctatg taggatgcac cgcaggcccc tggccactga aagagtgtgc agtggactgt480
gggtctccca tatgcggtgc cgcccaaagg tggctttgcc tcaagcaacc taccctgatg540
ttttactcat tggaatgttt ttccccgatt gtggatgact tcttttctga tggagagagt600
ccaggagggg tggaaaacgc ctggatttaa gctcagcatc cccacatgg gcttttcgat660
catcttcagg cctgaagctg cacgacctga agttcgccctg catttatcag ccctctttgt720
gctgctcctt gccaccttgg ggttcctgct ggggacctg tgtggttgtg gcatgtgtga780
gcagaagggg ggatgaggaa aaaagagaag gaaacccccg ttagtgacaa gtgttttttt840
gagttgccag gttttgccat cattaaa
867

```

```

<210> 133
<211> 257
<212> DNA
<213> homo sapiens

```

```

<400> 133

```

```

aattcagact cccattctta acttggcatt tttgtagctt acaggaacca gcttggtgta 60
ccttctctta tgagatgcag ctggaaagcc atttatgcaa gaggtgggtt cacttttgtc120
gctcctccat tcattgacct ttcagccttt aaaaaattag aatgtgaaaa ttagtagcaa180
agagtgcaga gatattagct taagggataa ataaatgaaa gtagcaagta gctcattatt240
tatgaagagt aataatt
257

```

```

<210> 134
<211> 204
<212> DNA
<213> homo sapiens

```

```

<400> 134

```

```

gactggctca tggcctctgt aaatggctgc tggcgggact gtctgcctag cgggtgccct 60
tggaacctag cccttggtgg gttttgagga aatgattcct gaatgaggag tcgattgccg120
tgtgaagggc tgggtggcacg gcacccgcgt gagctacgct tgccctcagt gcgcttctgg180

```

attgactggc catgggtgct caca

204

<210> 135

<211> 245

<212> DNA

<213> homo sapiens

<400> 135

```
ttgcaccatg gtaaactggtg ataatacagt atcatttttg agcagttttt taaatgtaaa 60
tctgtatctt actcagagtg tgtgtctgaa gttattaagg acatttccca acgttactgg120
cccatttccc tttgtaatca gaggaattct gtttcaagat tattgttggtg tgtgatctgt180
ggctcttgat cagaatgaag ttaaatggcc acaggaggat taagctatga gggtggcatt240
tttca                                         245
```

<210> 136

<211> 1637

<212> DNA

<213> homo sapiens

<400> 136

```
ggggagggac gagtatggaa ccctgaaggt agcaagtcca ggcaactggcc tgaccatccg 60
gctccctggg caccaagtcc caggcaggag cagctgtttt ccatcccttc ccagacaagc 120
tctattttta tcacaatgac cttagagagag gtctcccagg ccagctcaag gtgtcccact 180
atccccctctg gaggggaagag gcaggaaaat tctccccggg tccctgtcat gctactttct 240
ccatcccagt tcagactgtc caggacatct tatctgcagc cataagagaa ttataaggca 300
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<210> 137

<211> 260

<212> DNA

<213> homo sapiens

<400> 137

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tacagacgac aagagtatca ggtagaattc aacatatggt gcttgaagtg ggctcttggt180
ttatcagtta tggcatatgt aaataacagt gtaccaagtt agtgtgggtg ttatgaagat240
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```

<210> 138
<211> 957
<212> DNA
<213> homo sapiens

<400> 138

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<210> 139
<211> 760
<212> DNA
<213> homo sapiens

<400> 139

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aataaaactg agtaagtaat gaaaaaaaaa aaaaaaaaaa 760
```

<210> 140
<211> 280
<212> DNA
<213> homo sapiens

<400> 140

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<210> 141
<400> 141
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<210> 142
<211> 461
<212> DNA
<213> homo sapiens

<400> 142

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<210> 143
<211> 436
<212> DNA
<213> homo sapiens

<400> 143

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tagaggtgtg agttgggaag ttgttaaata caagaggggt tgagcttctg gagaagagga120
aaatgtaaaa gtattttttt ctttaagaaa gataaaaagg taagcctaaa ccttggcggc180
caccgaagtc agctgttacg catgtgtagt taaatttcac tgtaaattatt tcataagggg240
tcttagaatg gagccagggt gacatcacag cccaactgt accaaaggaa ccatttcatt300
caaataagcc aacatttcca aagaaacacg aatgtctatg gcagagttaa cataaggtca360
gaaaatcctc tggaagaaat ttcggtatca atgtttataa tctctgcatt taggggtttg420
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<210> 144
<211> 287
<212> DNA
<213> homo sapiens

<400> 144

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tgtacagaaa gtcactgtgg cctgagtaga gtcaaggaga aggagcagca agagttgagc180
ttagggaggt ggagaagggg tggaatagat caagcaagac cttggccctg gtagggatct240
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<210> 145
<211> 555
<212> DNA
<213> homo sapiens

<400> 145

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<210> 146
<211> 1790
<212> DNA
<213> homo sapiens

<400> 146

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<210> 147
<211> 2357
<212> DNA
<213> homo sapiens

<400> 147

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| | | | | | |
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| tcagtcacat | tgggtgtttt | tgtcaactgc | ttgttaattg | atttggggat | gtttgccccg1260 |
| aatgagaggt | tgaggaaaag | actgtgggtg | gggaggccct | gcctgaccca | tcccttttcc1320 |
| tttctggccc | cagcctaggt | ggaggcaagt | ggaatatctt | atattgggcg | atttgggggc1380 |
| tcggggaggc | agagaatctc | ttgggagctc | tggttgccgc | tggtgcattc | tgtttcctct1440 |
| tgatctcaaa | gcacaatgtg | gatttgggga | ccaaagggtc | gggacacatc | cccttagagg1500 |
| acctgagttt | gggagagtg | tgagtggga | ggaggagcag | caagaagcag | cctgttttca1560 |
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| tccctctact | cttctctgtc | taaaaatagg | ggcgcgtttc | ttacacaccc | ccagagagag1680 |
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| aaccatccat | ccctagaaga | gcacagagcc | ctgaggggct | gggctgagcc | gggctgagcc1800 |
| cctggtcttc | tctacagttc | acagaggtct | ttcagctcat | ttaatcccag | gaaagaggca1860 |
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| acagaaatga | ccacgtgaaa | tttgccctctg | tccaaacatt | tcatccgtgt | gtatgtgtat2160 |
| gtgtgtgagt | gtgtgaagcc | gccagttcat | ctttttatat | ggggttgttg | tctcattttg2220 |
| gtctgttttg | gtccccctcc | tcgtgggctt | gtgctcggca | ccaaagagaa | aaacgttttg2280 |
| ggggcttgta | atttatcctg | aaaaatttaa | ctttgagcga | aaagggggag | tgttttaccg2340 |
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<210> 148
 <211> 907
 <212> DNA
 <213> homo sapiens

<400> 148

| | | | | | |
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| ccaggtcctt | cttcctgggt | actcataacg | cggccccatt | tctcactccc | attgggctgc120 |
| gggtttctag | agaagccaat | cagtgtcgcc | gcagttccca | ggttctaaag | tcccacgcac180 |
| cccgcgggac | tcatattttt | cccagacgcg | gaggttgggg | tcatggcgcc | ccgaagcctc240 |
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| cagggagccg | cggccggagg | agggtctggc | gggtctcagc | ccctcctcgc | ccccaggctc420 |
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| tccgaggatg | gagccgcggg | agccgtgggt | ggagcaagag | gggcccagct | attgggagt600 |
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| ccgagggagg | ggaggcggtg | gattgctgga | gtggatactg | gggggggttt | acgcagggttc840 |
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<210> 149
 <211> 1987
 <212> DNA
 <213> homo sapiens

<400> 149

| | | | | | |
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| gatcatccac | gaggatggct | actccgagga | ggaatgccgg | cagtaccggg | cggttgtcta 120 |
| cagcaacacc | atccagtcca | tcatggccat | tgtcaaagcc | atgggcaacc | tgagatcga 180 |
| ctttgccgac | ccctccagag | cggacgacgc | caggcagcta | tttgcaactgt | cctgcaccgc 240 |
| cgaggagcaa | ggcgtgctcc | ctgatgacct | gtccggcgct | atccggaggc | tctgggctga 300 |
| ccatgggtgtg | caggcctgct | ttggccgctc | aagggaatac | cagctcaacg | actcagctgc 360 |
| ctactacctg | aacgacctgg | agcgtattgc | acagagtgc | tacatcccca | cacagcaaga 420 |
| tgtgtctacgg | acccgcgtaa | agaccacggg | gatcgtggag | acacacttca | ccttcaagga 480 |
| cctacacttc | aagatgtttg | atgtgggtg | tcagcggctc | gagcggaaga | agtggatcca 540 |

| | | | | | |
|-------------|-------------|------------|------------|-------------|-----------------|
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| ctagcaatga | cagtgggaat | aagggttgga | tccagcttcc | cgaggtggag | ctgtcagttt1980 |
| ccacaaagaa | agagtagcag | gcctttgtag | aacaaaacat | cagccttggg | tgggtgtgtt2040 |
| ctatataaac | tccaaaggga | aacacaccga | ctgcctcagc | aatcatgcaa | agaccttgcc2100 |
| tggcccgggtg | gcaagcgctg | aaaaaccgac | cgctgttagg | ctcctgggaa | tatacagata2160 |
| ggtaaagagt | tccaagtctg | tccagcccat | gtgcaaagtc | aacagtattt | gccttaagat2220 |
| ttcatatata | tatatTTTTT | tgcattgact | gctgagagct | cctgtttact | aagcaagctt2280 |
| ttgtgtttat | tatcctcatt | tttactgaac | attgttagtt | ttggggtaat | ggaaaccac2340 |
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| ttagaatctg | tttgcaaat | gtccaacca | ccccctcaac | atgaggggct | tccattttct2640 |
| gtgttttgta | agggaaactgt | ttccttcatt | ccgccattgt | cctgatatta | gttctgattt2700 |
| ctttttaaca | aattgttatca | tgattaaaga | aatttcacgc | actttaatgg | ccaattaact2760 |
| gagaatgtaa | gaaaattgat | gctgtacaag | gcaaataaag | ctgtttatta | accttgaaaa2820 |
| aaaaaaaaaa | aaggggaggga | ggggggggag | gggggagggg | gggggggggt | aggggggggg2880 |
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<400> 152

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<210> 153

<211> 2367

<212> DNA

<213> homo sapiens

<400> 153

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| ctttcggtcc | gccggacaca | ccggacagat | agacgtgcgg | acggcccacc | accccagccc 120 |
| gccaactagt | cagcctgcgc | ctggcgccctc | ccctctccag | gtccatccgc | catgtggccc 180 |
| ctgtggcgcc | tcgtgtctct | gctggccctg | agccaggccc | tgccctttga | gcagagaggc 240 |
| ttctgggact | tcaccttgga | cgatgggcca | ttcatgatga | acgatgagga | agcttcgggc 300 |
| gctgacacct | cgggcgtcct | ggacccggac | tctgtcacac | ccacctacag | cgccatgtgt 360 |
| cctttcggct | gccactgcc | cctgcgggtg | gttcagtgtc | ccgacctggg | tctgaagtct 420 |
| gtgccc aaag | agatctcccc | tgacaccacg | ctgctggacc | tgagaacaa | cgacatctcc 480 |
| gagctccgca | aggatgactt | caagggtctc | cagcacctct | acgccctcgt | cctggtgaac 540 |
| aacaagatct | ccaagatcca | tgagaaggcc | ttcagccca | tgcggaagct | gcagaagctc 600 |
| tacatctcca | agaaccacct | ggtggagatc | ccgccc aacc | taccagctc | cctggtggag 660 |
| ctccgcctcc | acgacaaccg | catccgcaag | gtgccc aagg | gagtgttcag | tgggctccgg 720 |
| aactgaact | gcctcgagat | gggcgggaac | ccactggaga | acagtggctt | tgaacctgga 780 |
| gccttcgatg | gcctgaagct | caactacctg | cgcattctcag | aggccaagct | gactggcatc 840 |
| cccaaagacc | tccctgagac | cctgaatgaa | ctccacctag | accacaacaa | aatccaggcc 900 |
| atcgaactgg | aggacctgct | tcgctactcc | aagctgtaca | ggctgggcct | aggccacaac 960 |
| cagatcagga | tgatcgagaa | cgggagcctg | agcttcctgc | ccacctccg | ggagctccac1020 |
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| ctctccctgg | ctcccaagg | tgcaggtggg | cgcaaggccc | ggcccccatc | acatgttccc1500 |
| ttggcctcag | agctgcccct | gctctcccac | cacagccacc | cagaggcacc | ccatgaagct1560 |
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| tcctcagacc | tttctcgctt | ctgagcttgg | tggcctgttc | cctccatctc | tccgaacctg1980 |
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| ttcctagaag | cccctcacc | ccactggccc | actggtggct | aggctctccc | ttatccttct2280 |
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<400> 154

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| cagttgcaca | cacacgcattg | ctcactccca | cactgtgtgc | actcaggtgg | ctgtgttggg 120 |
| cagttggggc | cagggtcccc | ctgctgtcct | gtggggccgg | catctgctct | ccttctttct 180 |
| ccccaggtac | ttctactccc | gaaggattga | catcaccttg | tcgtcagtca | agtgttcca 240 |
| caagctggcc | tctgcctatg | gggcccaggca | gctgcagggc | tactgcgcaa | gcctctttgc 300 |
| catcctcctc | ccccaggacc | cctcgttcca | gatgcccctg | gacctgtatg | cctatgcagt 360 |
| ggccacaggg | gacgccctgc | tggagaagct | ctgcctacag | ttcctggcct | ggaacttcca 420 |
| ggccttgacg | caggccgagg | cctggcccag | tgtccccaca | gacctgtctc | aactgctgct 480 |
| gcccaggagc | gacctggcgg | tgcccagcga | gctggcccta | ctgaaggccg | tggacacctg 540 |
| gagctggggg | gagcgtgcct | cccatgagga | ggtggagggc | ttggtggaga | agatccgctt 600 |
| ccccatgatg | ctccctgagg | agctctttga | gctgcagttc | aacctgtccc | tgtactggag 660 |
| ccacgagggc | ctgttccaga | agaagactct | gcaggccctg | gaattccaca | ctgtgccctt 720 |
| ccagttgctg | gcccgggtaca | aaggcctgaa | cctcacccag | gatacctaca | agccccgat 780 |
| ttacacctcg | cccacctgga | gtgcctttgt | gacagacagt | tcctggagtg | cacggaagtc 840 |
| acaactggtc | tatcagtcca | gacggggggc | tttgggtcaa | tattcttctg | attacttcca 900 |
| agccccctct | gactacagat | actaccctta | ccagtccttc | cagactccac | aacaccccag 960 |
| cttctctctc | caggacaaga | gggtgtcctg | gtccctggct | tacctcccca | ccatccagag1020 |
| ctgctggaac | tacggcttct | cctgtctctc | ggacgagctc | cctgtcctgg | gcctcaccaal080 |
| gtctggcggc | tcagatcgca | ccattgccta | cgaaaacaaa | gcccgtgatgc | tctgcgaagg1140 |
| gctcttcgtg | gcagacgtca | ccgatttcca | gggctggaag | gctgcgattc | ccagtgcctt1200 |
| ggacaccaac | agctcgaaga | gaacctctct | cttccctctg | cccggcagag | cttttcaaac1260 |
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 <212> DNA
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<400> 155

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| taacgaacct | attccccaac | ccacaatacc | ccaccctcca | acaacctaaa | acaacgactt120 |
| catgtccccc | tgcccaaaaac | gcacagacct | tcaacctgga | cggctccctg | atctatgaaa180 |
| gactcccatc | gtcttgcagt | cgtctttcac | cagcgtgcgg | cagaaaatcg | agaaggagga240 |
| tgacagtga | ggcgaggaga | gtgaggagga | ggaagagggc | gaggagggaag | gctccgaatc300 |
| cgaatctcgg | tcctgcaaaag | tgaagatcaa | gcttggccgg | aaggagaagg | cacaggaccg360 |
| gctgaagggc | ggccggcgcc | ggccgagccg | agggctccga | gccaagccgg | tcgtgagtga420 |
| cgatgacagt | gaggagggaac | aagaggagga | ccgctcagga | agtggcagcg | aagaagactg480 |
| agccccgaca | ttccagtctc | gaccccgagc | ccctcgttcc | agagctgaga | tggcataggg540 |
| cttagcagta | acgggtagca | gcagatgtag | tttcagactt | ggagtaaaac | tgtataaaca600 |
| aaagaatctt | ccatatttat | acagcagaga | agctgtagga | ctgtttgtga | ctggccctgt660 |
| cctggcatca | gtagcatctg | taacagcatt | aactgtctta | aagagagaga | gagagaattc720 |
| cgaattgggg | aacacacgat | acctgttttt | cttttccgtt | gctggcagta | ctgttgccgc780 |

| | | | | | |
|-------------|------------|------------|------------|-------------|---------------|
| gcagtttggga | gtcactgtag | ttaagtgtgg | atgcatgtgc | gtcaccgtcc | actcctccta840 |
| ctgtattttta | ttggacaggt | cagactcgcc | ggggggcccg | cgaggggtatg | tcagtgtcac900 |
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<210> 156
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 <212> DNA
 <213> homo sapiens

<400> 156

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| ggattttctcc | gcctcagccc | aacggggagg | gctagtgtgca | catagtgatt | tagatgaaag | 120 |
| agctattgaa | gctttaaaag | aattcaatga | agacgggtgca | ttggcagttc | ttcaacagtt | 180 |
| taaagacagt | gatctctctc | atgttcagaa | caaaagtgcc | tttttatgtg | gagtcatgaa | 240 |
| gacttacagg | cagagagaaa | aacaagggac | caaagtagca | gattctagta | aaggaccaga | 300 |
| tgaggcaaaa | attaaggcac | tcttggaag | aacagggtac | acacttgatg | tgaccactgg | 360 |
| acagaggaag | tatggaggac | cacctccaga | ttccgtttat | tcaggtcagc | agccttctgt | 420 |
| tggcactgag | atatttgtgg | gaaagatccc | aagagatcta | tttgaggatg | aacttgttcc | 480 |
| attatttgag | aaagctggac | ctatatggga | tcttcgtcta | atgatggatc | cactcactgg | 540 |
| tctcaataga | ggttatgcgt | ttgtcacttt | ttgtacaaaa | gaagcagctc | aggaggctgt | 600 |
| taaactgtat | aataatcatg | aaattcgttc | tggaatacat | attggtgtct | gcactctcagt | 660 |
| tgccaacaat | aggctttttg | tgggctctat | tcctaagagt | aaaaccaagg | aacagattct | 720 |
| tgaagaat | agcaagtaa | cagaggggtct | tacagacgtc | attttatacc | accaaccgga | 780 |
| tgacaagaaa | aaaaacagag | gcttttgctt | tcttgaatat | gaagatcaca | aaacagctgc | 840 |
| ccaggtaaaa | gtgctgtttg | tacgcaacct | tgccaatact | gtaacagaag | agatttttaga | 900 |
| aaaggcattt | agtcagtttg | ggaacttgga | acgagtgaag | aagttaaaag | attatgcgtt | 960 |
| cattctattt | gatgagcgag | atggtgctgt | gaagaaatga | atggcaaaga | 1020 | |
| cttggaggga | gaaaatattg | aaattgtttt | tgccaagcca | ccagatcaga | aaaggaaaga | 1080 |
| aagaaaagct | cagaggcaag | cagcaaaaaa | tcaaatgtat | gacgattact | actattatgg | 1140 |
| tccacctcat | atgccccctc | caacaagagg | tcgagggcgt | ggaggtagag | gtgggtatgg | 1200 |
| atatcctcca | gattattatg | gatatgaaga | ttattatgat | tattatggtt | atgattacca | 1260 |
| taactatcgt | ggtggatatg | aagatccata | ctatggttat | gaagattttc | aagttggagc | 1320 |
| tagaggaagg | ggtggtagag | gagcaagggg | tgctgctcca | tccagagggtc | gtggggctgc | 1380 |
| tcctccccgc | ggtagagccg | gttattcaca | gagaggagggt | cctggatcag | caagaggcgt | 1440 |
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| ggccggtcct | gacctgttac | aatgaagact | gacttgctat | gtgggattac | accagaagct | 1560 |
| tgagtgagg | taatggtaag | gaaatcaagc | aaccttaaat | atgtcggctg | tataggagca | 1620 |
| tattctattg | cagaagacct | tcctatgaag | atcatggaat | caaatacggg | acattgaact | 1680 |
| aatacttgga | ctttgatatg | aatctcttta | acaattttct | ctgcagtgca | agttattaaa | 1740 |
| ctaaagctac | tctattttca | aaatgtgttc | caacagaaat | ccttcataac | tcctagcatg | 1800 |
| gtatcttaat | aaagaataaa | gttcttttaa | aaatctgtct | taagtagatt | tttccccttt | 1860 |
| tttaaattaa | ggatcccaac | agtggatatt | tgaaatatct | tcttgaattt | gtgcatttaa | 1920 |
| attttattgc | agtggtagat | atgaatgcca | ctgatggtag | ccttaaattt | tatttctgct | 1980 |
| caccaagggt | aatcatgatt | gtctatatct | tttttatagt | gatcactttt | gaattgtggt | 2040 |
| cagatatgca | gtttcagggt | taatcatcag | agctgggttag | tcaggcattc | cagatagtgg | 2100 |
| ttcttttcag | aaccttttta | aaagggttgg | ttactacact | cagtagcaga | ggattgaact | 2160 |
| ataccctgtc | tgtactgtac | atagaaaatc | tttgtagata | aaagcaaggc | ttgttaaata | 2220 |
| tgatatgagg | gtaagatttt | aatataccaa | atgtaacatt | cttagttgcc | tttagtttca | 2280 |
| gaggcttgta | agacttctct | atgaccatca | taacaggcct | tgcttttgct | gtattttgtg | 2340 |
| gctgaaaaag | cagccttgct | tcttcagata | ttgtagttat | ttggatgtat | aatagtttag | 2400 |
| caagatgtta | cttttgtaag | acatcagatg | ttcaaaaaag | tgcatccgaa | cttgactaa | 2460 |
| atactgcagt | gtccctttat | aaaaagtcag | actaaaactg | acaattgtac | agcgaagcct | 2520 |
| gacatttgga | tattttgaag | ttttttcata | aatcatagaa | attagtatat | ggctgtagtt | 2580 |
| tagcttttta | ggtaaaagg | atgttttcatt | agtgcatctt | ttcctgctga | tcactgtaaa | 2640 |
| catgtgaatc | agctttccat | ttcttatgca | ggatcatgata | acttgtagag | tagagtacaa | 2700 |
| tcatttgtgc | tatgttttta | attttctaaa | gcaccttgat | gacagtgagt | gtccagtggg | 2760 |
| gaagcatcct | ctattgaacc | accctcaaaa | atttttttgc | caagtcctaa | gttgatagct | 2820 |
| taaagtaaaa | agtgaataat | atagtttcat | taggacttgg | tgtaaaagaa | tcccctcccc | 2880 |
| ccttcccca | agggatactg | cagttatata | acatacccaa | taggcaccac | gatgaagatc | 2940 |
| agagcttata | cttaattaag | gttttataca | caccagttcc | ccagtaaatg | caaatttaac | 3000 |
| aagaaaatca | gacatgtcat | atgttcaaaa | tgctcatggc | aaacaatcat | tttgcatccc | 3060 |

GenBank accession number: U00180.1 (Homo sapiens genome, chromosome 1, p11.2)

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3101

<210> 157

<211> 983

<212> DNA

<213> homo sapiens

<400> 157

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cggcggggggc ggacggggcgg caccaggacc caggggaacc gcgacgggagc ggcggcgagc180
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<210> 158

<211> 293

<212> PRT

<213> homo sapiens

<400> 158

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| Phe 1 | Ile | Asp | Ser | Tyr 5 | Arg | Cys | Phe | Gln | Pro 10 | Lys | Gln | Glu | Gly | Ala 15 | Phe |
| Thr | Cys | Trp | Ser 20 | Ala | Val | Thr | Gly | Ala 25 | Arg | His | Leu | Asn | Tyr 30 | Gly | Ser |
| Arg | Leu | Asp 35 | Tyr | Thr | Leu | Gly | Asp 40 | Arg | Thr | Leu | Val | Ile 45 | Asp | Thr | Phe |
| Gln | Ala 50 | Ser | Phe | Leu | Leu | Pro 55 | Glu | Val | Met | Gly | Ser 60 | Asp | His | Cys | Pro |
| Val 65 | Gly | Ala | Val | Leu | Ser 70 | Val | Ser | Ser | Val | Pro 75 | Ala | Lys | Gln | Cys | Pro 80 |
| Pro | Leu | Cys | Thr | Arg 85 | Phe | Leu | Pro | Glu | Phe 90 | Ala | Gly | Thr | Gln | Leu 95 | Lys |
| Ile | Leu | Arg | Phe 100 | Leu | Val | Pro | Leu | Glu 105 | Gln | Ser | Pro | Val | Leu 110 | Glu | Gln |
| Ser | Thr | Leu 115 | Gln | His | Asn | Asn | Gln 120 | Thr | Arg | Val | Gln | Thr 125 | Cys | Gln | Asn |
| Lys | Ala 130 | Gln | Val | Arg | Ser | Thr 135 | Arg | Pro | Gln | Pro | Ser 140 | Gln | Val | Gly | Ser |
| Ser 145 | Arg | Gly | Gln | Lys | Asn 150 | Leu | Lys | Ser | Tyr | Phe 155 | Gln | Pro | Ser | Pro | Ser 160 |

| | | | | | | | | | | | | | | | |
|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Cys | Pro | Gln | Ala | Ser 165 | Pro | Asp | Ile | Glu | Leu 170 | Pro | Ser | Leu | Pro | Leu 175 | Met |
| Ser | Ala | Leu | Met 180 | Thr | Pro | Lys | Thr | Pro 185 | Glu | Glu | Lys | Ala | Val 190 | Ala | Lys |
| Val | Val | Lys 195 | Gly | Gln | Ala | Lys | Thr 200 | Ser | Glu | Ala | Lys | Asp 205 | Glu | Lys | Glu |
| Leu | Arg 210 | Thr | Ser | Phe | Trp | Lys 215 | Ser | Val | Leu | Ala | Gly 220 | Pro | Leu | Arg | Thr |
| Pro 225 | Leu | Cys | Gly | Gly | His 230 | Arg | Glu | Pro | Cys | Val 235 | Met | Arg | Thr | Val | Lys 240 |
| Lys | Pro | Gly | Pro | Asn 245 | Leu | Gly | Arg | Arg | Phe 250 | Tyr | Met | Cys | Ala | Arg 255 | Pro |
| Arg | Gly | Pro | Pro 260 | Thr | Asp | Pro | Ser | Ser 265 | Arg | Cys | Asn | Ser | Ser 270 | Ser | Gly |
| Ala | Gly | Pro 275 | Ala | Glu | Pro | Met | Glu 280 | Ala | Trp | Gly | His | Leu 285 | Ala | Trp | Ser |
| Pro | Leu 290 | His | Met | Ile | | | | | | | | | | | |

<210> 159
 <211> 131
 <212> PRT
 <213> homo sapiens

<400> 159

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| Glu 1 | Thr | Leu | Arg | Glu 5 | Lys | Gln | Glu | Ala | Ala 10 | Gln | Gly | Arg | Gly | Ala 15 | Gly |
| Leu | Arg | Ser | Cys 20 | Ala | Gly | Val | Thr | Met 25 | Pro | Asp | Val | Pro | Arg 30 | Pro | Pro |
| Leu | Val | Gln 35 | Leu | Gly | Leu | Leu | Gln 40 | Arg | Lys | Asn | Cys | Thr 45 | Gly | Arg | Arg |
| Gly | Gln 50 | Trp | Glu | Asp | Pro | Gly 55 | Ala | Trp | His | Thr | Cys 60 | Arg | Ser | Gly | Gly |
| Pro 65 | Ser | Trp | Val | Leu | Ala 70 | Ser | Ser | Gln | Tyr | Ala 75 | Ser | His | Met | Ala | Pro 80 |
| Cys | Gly | Pro | His | Arg 85 | Gly | Val | Cys | Ala | Arg 90 | Ala | Pro | Pro | Ala | Gln 95 | Thr |
| Ser | Arg | Met | Arg 100 | Ser | Val | Thr | Pro | Ser 105 | His | Leu | Trp | Leu | Leu 110 | Lys | Ser |
| Trp | Pro | Ala 115 | Pro | Ser | Pro | Leu | Trp 120 | Pro | Leu | Pro | Ser | Leu 125 | Leu | Glu | Ser |
| Ser | Gly 130 | Ser | | | | | | | | | | | | | |

<210> 160

<211> 94
<212> PRT
<213> homo sapiens

<400> 160

| | | | | | | | | | | | | | | | |
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| Lys 1 | Arg | Arg | Pro | Lys 5 | Leu | Gly | Pro | Gly | Phe 10 | Phe | Thr | Val | Arg | Ile 15 | Thr |
| His | Gly | Ser | Leu 20 | Trp | Pro | Pro | Gln | Arg 25 | Gly | Val | Arg | Lys | Gly 30 | Pro | Ala |
| Ser | Thr | Asp 35 | Phe | Gln | Asn | Glu | Val 40 | Arg | Asn | Ser | Phe | Ser 45 | Ser | Leu | Ala |
| Ser | Glu 50 | Val | Leu | Ala | Cys | Pro 55 | Phe | Thr | Thr | Leu | Ala 60 | Thr | Ala | Phe | Ser |
| Ser 65 | Gly | Val | Phe | Gly | Val 70 | Met | Arg | Ala | Leu | Ile 75 | Ser | Gly | Arg | Leu | Gly 80 |
| Ser | Ser | Met | Ser | Gly 85 | Glu | Ala | Trp | Gly | Gln 90 | Leu | Gly | Glu | Gly | | |

<210> 161
<211> 136
<212> PRT
<213> homo sapiens

<400> 161

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| Leu 1 | His | Gln | Leu | Ala 5 | Ala | Gln | Arg | Leu | Tyr 10 | Leu | Arg | Pro | Val | Arg 15 | Val |
| Gly | Ala | Trp | Ala 20 | Leu | Ser | Leu | Pro | Gly 25 | Glu | Arg | Arg | Ala | Glu 30 | Ile | Ser |
| Asn | Gln | Trp 35 | Ser | Ala | Leu | Val | Thr 40 | Trp | Ile | Pro | Glu | Gly 45 | Arg | Glu | Gly |
| Ser | Thr 50 | Val | Ser | Ser | Ala | Ala 55 | Asp | Cys | Cys | Ser | Lys 60 | Asn | Val | Phe | Ser |
| Thr 65 | Ser | Phe | Glu | Ser | Pro 70 | Ser | His | Gly | Asn | Pro 75 | Ser | Thr | Pro | Thr | Arg 80 |
| Asp | Pro | Thr | Pro | Ala 85 | Val | Ser | Arg | Ile | Ser 90 | Ser | Thr | Cys | Thr | Ser 95 | Arg |
| Asp | Pro | Asn | Asp 100 | Ser | Cys | Thr | Asn | Glu 105 | His | Tyr | Gly | Ser | Cys 110 | Ser | Asn |
| Cys | Leu | Ser 115 | Thr | His | Cys | Val | Tyr 120 | Gly | Trp | Lys | Ala | Phe 125 | Gly | Arg | Lys |
| Lys | Gly 130 | Ser | Ser | Arg | Leu | Lys 135 | Gly | | | | | | | | |

<210> 162
<211> 281
<212> PRT
<213> homo sapiens

<400> 162

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| Pro 1 | Gly | Ser | Gln | Lys 5 | Val | Ala | Lys | Ala | Val 10 | Pro | Phe | Pro | Gln | Arg 15 | Arg |
| Thr | Ala | Ala | Val 20 | Arg | Met | Ser | Phe | Pro 25 | Pro | His | Leu | Asn | Arg 30 | Pro | Pro |
| Met | Gly | Ile 35 | Pro | Ala | Leu | Pro | Pro 40 | Gly | Ile | Pro | Pro | Pro 45 | Gln | Phe | Pro |
| Gly | Phe 50 | Pro | Pro | Pro | Val | Pro 55 | Pro | Gly | Thr | Pro | Met 60 | Ile | Pro | Val | Pro |
| Met 65 | Ser | Ile | Met | Ala | Pro 70 | Ala | Pro | Thr | Val | Leu 75 | Val | Pro | Thr | Val | Ser 80 |
| Met | Val | Gly | Lys | His 85 | Leu | Gly | Ala | Arg | Lys 90 | Asp | His | Pro | Gly | Leu 95 | Lys |
| Ala | Lys | Glu | Asn 100 | Asp | Glu | Asn | Cys | Gly 105 | Pro | Thr | Thr | Thr | Val 110 | Phe | Val |
| Gly | Asn | Ile 115 | Ser | Glu | Lys | Ala | Ser 120 | Asp | Met | Leu | Ile | Arg 125 | Gln | Leu | Leu |
| Ala | Lys 130 | Cys | Gly | Leu | Val | Leu 135 | Ser | Trp | Lys | Arg | Val 140 | Gln | Gly | Ala | Ser |
| Gly 145 | Lys | Leu | Gln | Ala | Phe 150 | Gly | Phe | Cys | Glu | Tyr 155 | Lys | Glu | Pro | Glu | Ser 160 |
| Thr | Leu | Arg | Ala | Leu 165 | Arg | Leu | Leu | His | Asp 170 | Leu | Gln | Ile | Gly | Glu 175 | Lys |
| Lys | Leu | Leu | Val 180 | Lys | Val | Asp | Ala | Lys 185 | Thr | Lys | Ala | Gln | Leu 190 | Asp | Glu |
| Trp | Lys | Ala 195 | Lys | Lys | Lys | Ala | Ser 200 | Asn | Gly | Asn | Ala | Arg 205 | Pro | Glu | Thr |
| Val | Thr 210 | Asn | Asp | Asp | Glu | Glu 215 | Ala | Leu | Asp | Glu | Glu 220 | Thr | Lys | Arg | Arg |
| Asp 225 | Gln | Met | Ile | Lys | Gly 230 | Ala | Ile | Glu | Val | Leu 235 | Ile | Arg | Glu | Tyr | Ser 240 |
| Ser | Glu | Leu | Asn | Ala 245 | Pro | Ser | Gln | Glu | Ser 250 | Asp | Ser | His | Pro | Gln 255 | Glu |
| Glu | Glu | Glu | Gly 260 | Lys | Glu | Gly | Gly | His 265 | Phe | Pro | Gln | Ile | Ser 270 | Ser | Gly |
| Pro | Thr | Asp 275 | Pro | Leu | Ser | Thr | His 280 | His | | | | | | | |

<210> 163

<211> 103

<212> PRT

<213> homo sapiens

<400> 163

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| Cys 1 | Ser | Leu | Val | Gln 5 | Glu | Ser | Leu | Gly | Ser 10 | Leu | Glu | Val | Gln | Val 15 | Glu | |
| Glu | Ile | Leu | Glu 20 | Thr | Ala | Gly | Val | Gly 25 | Ser | Leu | Val | Gly | Val 30 | Leu | Gly | |
| Phe | Pro | Trp 35 | Glu | Gly | Asp | Ser | Asn 40 | Glu | Val | Glu | Lys | Thr 45 | Phe | Leu | Leu | |
| Gln | Gln 50 | Ser | Ala | Ala | Glu | Glu 55 | Thr | Val | Leu | Pro | Ser 60 | Arg | Pro | Ser | Gly | |
| Ile 65 | Gln | Val | Thr | Ser | Ala 70 | Leu | His | Trp | Phe | Glu 75 | Ile | Ser | Ala | Arg | Arg 80 | |
| Ser | Pro | Gly | Arg | Leu 85 | Ser | Ala | Gln | Ala | Pro 90 | Thr | Arg | Thr | Gly | Arg 95 | Lys | |
| Tyr | Ser | Arg | Cys 100 | Ala | Ala | Ser | | | | | | | | | | |

<210> 164
 <211> 127
 <212> PRT
 <213> homo sapiens

<400> 164

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| Asn 1 | Ile | Ser | Leu | Leu 5 | Asp | His | Pro | Gly | Leu 10 | Gln | Ser | Cys | Leu | Tyr 15 | Phe | |
| Leu | Phe | Trp | Ile 20 | Leu | Phe | Thr | Asn | Arg 25 | Glu | Arg | Tyr | Ile | Ser 30 | Ala | Trp | |
| Lys | Trp | Pro 35 | Asp | Val | Trp | Lys | Leu 40 | Asp | Ile | Trp | His | Phe 45 | Gly | Leu | His | |
| Ser | His 50 | Gly | Tyr | Tyr | Ser | His 55 | Asn | Lys | Asp | Gly | Ser 60 | Gly | Asn | Ser | Phe | |
| Leu 65 | Asp | Leu | Asp | Gln | Pro 70 | Ser | Arg | Tyr | Leu | Gly 75 | Ile | Tyr | Tyr | Ile | Leu 80 | |
| Phe | Cys | Ile | Phe | Leu 85 | Val | Leu | Trp | Arg | Asp 90 | Ser | Leu | Ala | Ile | Phe 95 | Gly | |
| Leu | Pro | Glu | Tyr 100 | Val | Phe | Cys | Val | Tyr 105 | Ser | Ala | Pro | Val | Lys 110 | Trp | Phe | |
| Cys | Leu | Val 115 | Cys | His | Asn | Pro | His 120 | Gly | Cys | Tyr | Met | Ser 125 | Ile | Ser | | |

<210> 165
 <211> 382
 <212> PRT
 <213> homo sapiens

<400> 165

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| His 1 | Glu | Val | Leu | Cys 5 | Cys | Arg | Met | Ala | Pro 10 | Leu | Gln | Lys | Ala | Lys 15 | Val | |
| Ile | Arg | Leu | Ile | Lys | Ile | Ser | Pro | Glu | Lys | Pro | Ile | Thr | Leu | Ala | Val | |

| | | | 20 | | | | 25 | | | | 30 | | | | |
|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Gly | Asp | Gly 35 | Ala | Asn | Asp | Val | Ser 40 | Met | Ile | Gln | Glu | Ala 45 | His | Val | Gly |
| Ile | Gly 50 | Ile | Met | Gly | Lys | Glu 55 | Gly | Arg | Gln | Ala | Ala 60 | Arg | Asn | Ser | Asp |
| Tyr 65 | Ala | Ile | Ala | Arg | Phe 70 | Lys | Phe | Leu | Ser | Lys 75 | Leu | Leu | Phe | Val | His 80 |
| Gly | His | Phe | Tyr | Tyr 85 | Ile | Arg | Ile | Ala | Thr 90 | Leu | Val | Gln | Tyr | Phe 95 | Phe |
| Tyr | Lys | Asn | Val 100 | Cys | Phe | Ile | Thr | Pro 105 | Gln | Phe | Leu | Tyr | Gln 110 | Phe | Tyr |
| Cys | Leu | Phe 115 | Ser | Gln | Gln | Thr | Leu 120 | Tyr | Asp | Ser | Val | Tyr 125 | Leu | Thr | Leu |
| Tyr | Asn 130 | Ile | Cys | Phe | Thr | Ser 135 | Leu | Pro | Ile | Leu | Ile 140 | Tyr | Ser | Leu | Leu |
| Glu 145 | Gln | His | Val | Asp | Pro 150 | His | Val | Leu | Gln | Asn 155 | Lys | Pro | Thr | Leu | Tyr 160 |
| Arg | Asp | Ile | Ser | Lys 165 | Asn | Arg | Leu | Leu | Ser 170 | Ile | Lys | Thr | Phe | Leu 175 | Tyr |
| Trp | Thr | Ile | Leu 180 | Gly | Phe | Ser | His | Ala 185 | Phe | Ile | Phe | Phe | Phe 190 | Gly | Ser |
| Tyr | Leu | Leu 195 | Ile | Gly | Lys | Asp | Thr 200 | Ser | Leu | Leu | Gly | Asn 205 | Gly | Gln | Met |
| Phe | Gly 210 | Asn | Trp | Thr | Phe | Gly 215 | Thr | Leu | Val | Phe | Thr 220 | Val | Met | Val | Ile |
| Thr 225 | Val | Thr | Ile | Lys | Met 230 | Ala | Leu | Glu | Thr | His 235 | Phe | Trp | Thr | Trp | Ile 240 |
| Asn | His | Leu | Val | Thr 245 | Trp | Gly | Ser | Ile | Ile 250 | Phe | Tyr | Phe | Val | Phe 255 | Ser |
| Leu | Phe | Tyr | Gly 260 | Gly | Ile | Leu | Trp | Pro 265 | Phe | Leu | Gly | Ser | Gln 270 | Asn | Met |
| Tyr | Phe | Val 275 | Phe | Ile | Gln | Leu | Leu 280 | Ser | Ser | Gly | Ser | Ala 285 | Trp | Phe | Ala |
| Ile | Ile 290 | Leu | Met | Val | Val | Thr 295 | Cys | Leu | Phe | Leu | Asp 300 | Ile | Ile | Lys | Lys |
| Val 305 | Phe | Asp | Arg | His | Leu 310 | His | Pro | Thr | Ser | Thr 315 | Glu | Lys | Ala | Gln | Met 320 |
| Tyr | Ser | Asn | Thr | Val 325 | Ala | Leu | Ser | Asp | Glu 330 | Phe | Ile | Ala | Leu | Gln 335 | Pro |
| Leu | Ser | Arg | Ala 340 | Arg | Asn | Gln | Leu | Ser 345 | Lys | Leu | Ser | Leu | Leu 350 | Lys | Gln |
| Met | Gln | Val | Ser | Ser | Ala | Trp | Thr | Pro | Cys | Ala | Val | Ser | Arg | Lys | Glu |

| | | | | | | | | | | | | | | | | |
|-----------|--------------|------------|------------|-----------|-----------|------------|------------|------------|-----------|-----------|------------|------------|------------|-----------|-----------|--|
| | | 355 | | | | | 360 | | | | | 365 | | | | |
| Lys | Gln 370 | Arg | Val | His | Leu | Leu 375 | Glu | Glu | Cys | Trp | Asn 380 | Glu | Leu | | | |
| <210> | 166 | | | | | | | | | | | | | | | |
| <211> | 85 | | | | | | | | | | | | | | | |
| <212> | PRT | | | | | | | | | | | | | | | |
| <213> | homo sapiens | | | | | | | | | | | | | | | |
| <400> | 166 | | | | | | | | | | | | | | | |
| Gln 1 | Glu | Leu | Asn | Lys 5 | His | Lys | Ile | His | Ile 10 | Leu | Gly | Ala | Gln | Lys 15 | Trp | |
| Pro | Glu | Asn | Pro 20 | Ser | Ile | Lys | Gln | Gly 25 | Lys | Tyr | Lys | Ile | Lys 30 | Tyr | Asn | |
| Arg | Ser | Pro 35 | Gly | Asn | Glu | Met | Val 40 | Asp | Pro | Ser | Pro | Lys 45 | Met | Ser | Phe | |
| Gln | Ser 50 | His | Leu | Tyr | Cys | Asp 55 | Cys | Asn | Asn | His | Asp 60 | Cys | Glu | Asp | Gln | |
| Ser 65 | Ala | Lys | Cys | Pro | Val 70 | Ser | Lys | His | Leu | Ala 75 | Ile | Ser | Lys | Gln | Arg 80 | |
| Cys | Ile | Phe | Pro | Tyr 85 | | | | | | | | | | | | |
| <210> | 167 | | | | | | | | | | | | | | | |
| <211> | 496 | | | | | | | | | | | | | | | |
| <212> | PRT | | | | | | | | | | | | | | | |
| <213> | homo sapiens | | | | | | | | | | | | | | | |
| <400> | 167 | | | | | | | | | | | | | | | |
| Arg 1 | Leu | Glu | Lys | Gly 5 | Pro | Leu | Pro | Phe | Gln 10 | Met | Pro | Gly | Met | Arg 15 | Leu | |
| Pro | Glu | Thr | Gln 20 | Val | Leu | Pro | Gly | Glu 25 | Ile | Asp | Glu | Thr | Pro 30 | Leu | Ser | |
| Lys | Pro | Gly 35 | His | Asp | Leu | Ala | Ser 40 | Met | Glu | Asp | Lys | Thr 45 | Glu | Lys | Trp | |
| Ser | Ser 50 | Gln | Pro | Glu | Gly | Pro 55 | Leu | Lys | Leu | Lys | Ala 60 | Ser | Ser | Thr | Asp | |
| Met 65 | Pro | Ser | Gln | Ile | Ser 70 | Val | Val | Asn | Val | Asp 75 | Gln | Leu | Trp | Glu | Asp 80 | |
| Ser | Val | Leu | Thr | Val 85 | Lys | Phe | Pro | Lys | Leu 90 | Met | Val | Pro | Arg | Phe 95 | Ser | |
| Phe | Pro | Ala | Pro 100 | Ser | Ser | Glu | Asp | Asp 105 | Val | Phe | Ile | Pro | Thr 110 | Val | Arg | |
| Glu | Val | Gln 115 | Cys | Pro | Glu | Ala | Asn 120 | Ile | Asp | Thr | Ala | Leu 125 | Cys | Lys | Glu | |
| Ser | Pro 130 | Gly | Leu | Trp | Gly | Ala 135 | Ser | Ile | Leu | Lys | Ala 140 | Gly | Ala | Gly | Val | |

| | | | | | | | | | | | | | | | |
|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Pro 145 | Gly | Glu | Gln | Pro | Val 150 | Asp | Leu | Asn | Leu | Pro 155 | Leu | Glu | Ala | Pro | Pro 160 |
| Ile | Ser | Lys | Val | Arg 165 | Val | His | Ile | Gln | Gly 170 | Ala | Gln | Val | Glu | Ser 175 | Gln |
| Glu | Val | Thr | Ile 180 | His | Ser | Ile | Val | Thr 185 | Pro | Glu | Phe | Val | Asp 190 | Leu | Ser |
| Val | Pro | Arg 195 | Thr | Phe | Ser | Thr | Gln 200 | Ile | Val | Arg | Glu | Ser 205 | Glu | Ile | Pro |
| Thr | Ser 210 | Glu | Ile | Gln | Thr | Pro 215 | Ser | Tyr | Gly | Phe | Ser 220 | Leu | Leu | Lys | Val |
| Lys 225 | Ile | Pro | Glu | Pro | His 230 | Thr | Gln | Ala | Arg | Val 235 | Tyr | Thr | Thr | Met | Thr 240 |
| Gln | His | Ser | Arg | Thr 245 | Gln | Glu | Gly | Thr | Glu 250 | Glu | Ala | Pro | Ile | Gln 255 | Ala |
| Thr | Pro | Gly | Val 260 | Asp | Ser | Ile | Ser | Gly 265 | Asp | Leu | Gln | Pro | Asp 270 | Thr | Gly |
| Glu | Pro | Phe 275 | Glu | Met | Ile | Ser | Ser 280 | Ser | Val | Asn | Val | Leu 285 | Gly | Gln | Gln |
| Thr | Leu 290 | Thr | Phe | Glu | Val | Pro 295 | Ser | Gly | His | Gln | Leu 300 | Ala | Asp | Ser | Cys |
| Ser 305 | Asp | Glu | Glu | Pro | Ala 310 | Glu | Ile | Leu | Glu | Phe 315 | Pro | Pro | Asp | Asp | Ser 320 |
| Gln | Glu | Ala | Thr | Thr 325 | Pro | Leu | Ala | Asp | Glu 330 | Gly | Arg | Ala | Pro | Lys 335 | Asp |
| Lys | Pro | Glu | Ser 340 | Lys | Lys | Ser | Gly | Leu 345 | Leu | Trp | Phe | Trp | Leu 350 | Pro | Asn |
| Ile | Gly | Phe 355 | Ser | Ser | Ser | Val | Asp 360 | Glu | Thr | Gly | Val | Asp 365 | Ser | Lys | Asn |
| Asp | Val 370 | Gln | Arg | Ser | Ala | Pro 375 | Ile | Gln | Thr | Gln | Pro 380 | Glu | Ala | Arg | Pro |
| Glu 385 | Ala | Glu | Leu | Pro | Lys 390 | Lys | Gln | Glu | Lys | Ala 395 | Gly | Trp | Phe | Arg | Phe 400 |
| Pro | Lys | Leu | Gly | Phe 405 | Ser | Ser | Ser | Pro | Thr 410 | Lys | Lys | Ser | Lys | Ser 415 | Thr |
| Glu | Asp | Gly | Ala 420 | Glu | Leu | Glu | Glu | Gln 425 | Lys | Leu | Gln | Glu | Glu 430 | Thr | Ile |
| Thr | Phe | Phe 435 | Asp | Ala | Arg | Glu | Ser 440 | Phe | Ser | Pro | Glu | Glu 445 | Lys | Glu | Glu |
| Gly | Glu 450 | Leu | Ile | Gly | Pro | Val 455 | Gly | Thr | Gly | Leu | Asp 460 | Ser | Arg | Val | Met |
| Val 465 | Thr | Ser | Ala | Ala | Arg 470 | Thr | Glu | Leu | Ile | Leu 475 | Pro | Glu | Gln | Asp | Arg 480 |

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|------------|-----|-----|-----|-----|------------|-----|-----|-----|-----|------------|-----|
| Lys | Ala | Asp | Asp | Glu 485 | Ser | Lys | Gly | Ser | Gly 490 | Leu | Gly | Pro | Asn | Glu 495 | Gly |
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<210> 168
 <211> 125
 <212> PRT
 <213> homo sapiens

<400> 168

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| Ser 1 | Leu | Pro | Ala | Ser 5 | Met | Tyr | Trp | Asp | Ser 10 | Lys | His | Ser | His | Leu 15 | Lys |
| Phe | Leu | Leu | Ala 20 | Thr | Ser | Leu | Gln | Thr 25 | Ala | Val | Gln | Met | Arg 30 | Ser | Gln |
| Gln | Lys | Phe 35 | Leu | Ser | Phe | Pro | Leu 40 | Met | Ile | Ala | Lys | Arg 45 | Gln | Pro | His |
| His | Trp 50 | Gln | Met | Lys | Ala | Gly 55 | Leu | Gln | Lys | Thr | Asn 60 | Gln | Lys | Val | Lys |
| Asn 65 | Leu | Val | Cys | Ser | Gly 70 | Phe | Gly | Phe | Gln | Thr 75 | Leu | Gly | Phe | Pro | Leu 80 |
| Leu | Leu | Met | Arg | Gln 85 | Val | Leu | Ile | Pro | Lys 90 | Met | Thr | Ser | Arg | Asp 95 | Leu |
| Leu | Pro | Phe | Lys 100 | His | Ser | Leu | Arg | His 105 | Asp | Gln | Arg | Gln | Asn 110 | Cys | Leu |
| Lys | Asn | Arg 115 | Arg | Arg | Gln | Ala | Gly 120 | Ser | Asp | Phe | Pro | Asn 125 | | | |

<210> 169
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 <212> PRT
 <213> homo sapiens

<400> 169

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| Met 1 | Gly | Ala | Asp | Leu 5 | Trp | Thr | Ser | Phe | Leu 10 | Glu | Ser | Thr | Pro | Val 15 | Ser |
| Ser | Thr | Glu | Glu 20 | Glu | Asn | Pro | Met | Phe 25 | Gly | Ser | Gln | Asn | Gln 30 | Ser | Arg |
| Pro | Asp | Phe 35 | Leu | Leu | Ser | Gly | Leu 40 | Ser | Phe | Gly | Ala | Leu 45 | Pro | Ser | Ser |
| Ala | Ser 50 | Gly | Val | Val | Ala | Ser 55 | Trp | Leu | Ser | Ser | Gly 60 | Gly | Asn | Ser | Arg |
| Ile 65 | Ser | Ala | Gly | Ser | Ser 70 | Ser | Glu | Gln | Leu | Ser 75 | Ala | Ser | Trp | Trp | Pro 80 |
| Glu | Gly | Thr | Ser | Asn 85 | Val | Ser | Val | Cys | Cys 90 | Pro | Ser | Thr | Leu | Thr 95 | Leu |
| Glu | Glu | Ile | Ile 100 | Ser | Asn | Gly | Ser | Pro 105 | Val | Ser | Gly | Trp | Arg 110 | Ser | Pro |

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Met | Glu | Ser | Thr | Pro | Gly | Val | Ala | Cys | Met | Gly | Ala | Ser | Ser | Val |
| | | 115 | | | | | 120 | | | | | 125 | | | |

| | |
|-----|-----|
| Pro | Ser |
| | 130 |

<210> 170
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 <212> PRT
 <213> homo sapiens

<400> 170

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| Val | Val | Tyr | Arg | Gly | Val | Lys | Cys | Phe | Ile | Asp | Lys | Lys | Lys | Lys | Thr |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Ala | Leu | Glu | Pro | Thr | Tyr | Ser | Ser | Ser | Ser | Ser | Ser | Ser | Ser | Ser | Ser |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Ser | Ser | Ser | Ser | Ser | Ser | Ser | Ser | Ser | Ser | Ser | Ser | Ser | Ser | Ser | Ser |
| | | 35 | | | | | 40 | | | | | 45 | | | |
| Ser | Ser | Ser | Ser | Phe | Phe | Phe | Leu | Leu | Phe | Ser | Ala | Leu | Thr | Thr | Pro |
| | 50 | | | | | 55 | | | | | 60 | | | | |
| Phe | Phe | Ala | Ala | Ser | Gly | Phe | Pro | Leu | Ala | Arg | Tyr | Ala | Ala | Ile | Ser |
| 65 | | | | | 70 | | | | | 75 | | | | | 80 |
| Phe | Ser | Tyr | Phe | Ser | Phe | Thr | Ser | Gln | Pro | Ser | Phe | His | Lys | Ala | Ala |
| | | | | 85 | | | | | 90 | | | | | 95 | |
| Cys | His | Leu | Gln | Gln | Cys | Tyr | Ser | Thr | Ser | Leu | Pro | Val | Ser | Ser | Gln |
| | | | 100 | | | | | 105 | | | | | 110 | | |
| His | His | Gln | Trp | Thr | Gly | Gln | Asp | Val | Leu | Leu | | | | | |
| | | 115 | | | | | 120 | | | | | | | | |

<210> 171
 <211> 157
 <212> PRT
 <213> homo sapiens

<400> 171

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|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Lys | Lys | Leu | Tyr | Leu | Leu | Arg | Ser | Ile | Gln | Asn | Val | Asn | Lys | Thr | Ala |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Ala | Ile | Phe | Phe | Leu | Gln | Leu | Gln | Ser | Gly | Ile | Gln | Leu | Thr | Glu | Gln |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Gln | Leu | Ser | Ser | Tyr | Lys | Leu | His | Gln | Arg | Gln | Leu | Lys | Met | Lys | Lys |
| | | 35 | | | | | 40 | | | | | 45 | | | |
| Ile | Lys | Pro | Lys | Lys | Lys | Thr | Lys | Arg | Lys | Lys | Lys | Lys | Lys | Gln | Lys |
| | 50 | | | | | 55 | | | | | 60 | | | | |
| Thr | Lys | Leu | Pro | Ser | Pro | Tyr | Ile | Thr | Asn | Leu | Cys | Cys | Ala | Pro | Thr |
| 65 | | | | | 70 | | | | | 75 | | | | | 80 |
| Arg | Thr | Cys | Phe | Lys | Phe | Pro | Cys | Gln | Phe | Thr | Thr | Pro | Ile | Leu | Tyr |
| | | | | 85 | | | | | 90 | | | | | 95 | |
| Gln | Ala | Arg | Leu | Val | Ala | Ile | Glu | Asn | Thr | Thr | Arg | Thr | Gly | Leu | Ser |

| 100 | | | | | | | 105 | | | | 110 | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Lys | Asp | Thr | Phe | Gly | Ser | Val | Leu | Thr | Ile | Gln | Lys | Lys | Thr | Leu | Tyr |
| | | 115 | | | | | 120 | | | | | 125 | | | |
| Ser | Leu | Lys | Thr | Asn | Leu | Thr | Gln | Pro | Tyr | Ile | Ser | Ile | Phe | Phe | Phe |
| | 130 | | | | | 135 | | | | | 140 | | | | |
| Lys | Arg | Ser | Glu | Leu | Cys | Thr | Gly | Gly | Leu | Asn | Ala | Leu | | | |
| 145 | | | | | 150 | | | | | 155 | | | | | |

<210> 172
 <211> 152
 <212> PRT
 <213> homo sapiens

<400> 172

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Asn | Met | Gly | Lys | Gly | Asp | Pro | Lys | Lys | Pro | Arg | Gly | Lys | Met | Ser |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Ser | Tyr | Ala | Phe | Phe | Val | Gln | Thr | Cys | Arg | Glu | Glu | His | Lys | Lys | Lys |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| His | Pro | Asp | Ala | Ser | Val | Asn | Phe | Ser | Glu | Phe | Ser | Lys | Lys | Cys | Ser |
| | | 35 | | | | | 40 | | | | | 45 | | | |
| Glu | Arg | Trp | Lys | Thr | Met | Ser | Ala | Lys | Glu | Lys | Gly | Lys | Phe | Glu | Asp |
| | 50 | | | | | 55 | | | | | 60 | | | | |
| Met | Ala | Lys | Ala | Asp | Lys | Ala | Arg | Tyr | Glu | Arg | Glu | Met | Lys | Thr | Tyr |
| 65 | | | | | 70 | | | | | 75 | | | | | 80 |
| Ile | Pro | Pro | Lys | Gly | Glu | Thr | Lys | Lys | Lys | Phe | Lys | Asp | Pro | Asn | Ala |
| | | | | 85 | | | | | 90 | | | | | 95 | |
| Pro | Lys | Arg | Pro | Pro | Ser | Ala | Phe | Phe | Leu | Phe | Cys | Ser | Glu | Tyr | Arg |
| | | | 100 | | | | | 105 | | | | | 110 | | |
| Pro | Lys | Ile | Lys | Gly | Glu | His | Pro | Gly | Leu | Ser | Ile | Gly | Asp | Val | Ala |
| | | 115 | | | | | 120 | | | | | 125 | | | |
| Lys | Lys | Leu | Gly | Glu | Met | Trp | Asn | Asn | Thr | Ala | Ala | Asp | Asp | Lys | Gln |
| | 130 | | | | | 135 | | | | | 140 | | | | |
| Pro | Tyr | Glu | Lys | Lys | Ala | Ala | Lys | | | | | | | | |
| 145 | | | | | 150 | | | | | | | | | | |

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<400> 173

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| Ser | Gly | Ser | Ala | Gly | Pro | Gly | Pro | Arg | Gly | Pro | Arg | Ala | Thr | Glu | Ser |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Gly | Lys | Arg | Met | Asp | Cys | Pro | Ala | Leu | Pro | Pro | Gly | Trp | Lys | Lys | Glu |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Glu | Val | Ile | Arg | Lys | Ser | Gly | Leu | Ser | Ala | Gly | Lys | Ser | Asp | Val | Tyr |
| | | 35 | | | | | 40 | | | | | 45 | | | |

| | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|
| Tyr | Phe | Ser | Pro | Ser | Gly | Lys | Lys | Phe | Arg | Ser | Lys | Pro | Gln | Leu | Ala | |
| | 50 | | | | | 55 | | | | | 60 | | | | | |
| Arg | Tyr | Leu | Gly | Asn | Thr | Val | Asp | Leu | Ser | Ser | Phe | Asp | Phe | Arg | Thr | |
| 65 | | | | | 70 | | | | | 75 | | | | | 80 | |
| Gly | Lys | Met | Met | Pro | Ser | Lys | Leu | Gln | Lys | Asn | Lys | Gln | Arg | Leu | Arg | |
| | | | | 85 | | | | | 90 | | | | | 95 | | |
| Asn | Asp | Pro | Leu | Asn | Gln | Asn | Lys | Gly | Lys | Pro | Asp | Leu | Asn | Thr | Thr | |
| | | | 100 | | | | | 105 | | | | | 110 | | | |
| Leu | Pro | Ile | Arg | Gln | Thr | Ala | Ser | Ile | Phe | Lys | Gln | Pro | Val | Thr | Lys | |
| | | 115 | | | | | 120 | | | | | 125 | | | | |
| Val | Thr | Asn | His | Pro | Ser | Asn | Lys | Val | Lys | Ser | Asp | Pro | Gln | Arg | Met | |
| | 130 | | | | | 135 | | | | | 140 | | | | | |
| Asn | Glu | Gln | Pro | Arg | Gln | Leu | Phe | Trp | Glu | Lys | Arg | Leu | Gln | Gly | Leu | |
| 145 | | | | | 150 | | | | | 155 | | | | | 160 | |
| Ser | Ala | Ser | Asp | Val | Thr | Glu | Gln | Ile | Ile | Lys | Thr | Met | Glu | Leu | Pro | |
| | | | | 165 | | | | | 170 | | | | | 175 | | |
| Lys | Gly | Leu | Gln | Gly | Val | Gly | Pro | Gly | Ser | Asn | Asp | Glu | Thr | Leu | Leu | |
| | | | 180 | | | | | 185 | | | | | 190 | | | |
| Ser | Ala | Val | Ala | Ser | Ala | Leu | His | Thr | Ser | Ser | Ala | Pro | Ile | Thr | Gly | |
| | | 195 | | | | | 200 | | | | | 205 | | | | |
| Gln | Val | Ser | Ala | Ala | Val | Glu | Lys | Asn | Pro | Ala | Val | Trp | Leu | Asn | Thr | |
| | 210 | | | | | 215 | | | | | 220 | | | | | |
| Ser | Gln | Pro | Leu | Cys | Lys | Ala | Phe | Ile | Val | Thr | Asp | Glu | Asp | Ile | Arg | |
| 225 | | | | | 230 | | | | | 235 | | | | | 240 | |
| Lys | Gln | Glu | Glu | Arg | Val | Gln | Gln | Val | Arg | Lys | Lys | Leu | Glu | Glu | Ala | |
| | | | | 245 | | | | | 250 | | | | | 255 | | |
| Leu | Met | Ala | Asp | Ile | Leu | Ser | Arg | Ala | Ala | Asp | Thr | Glu | Glu | Met | Asp | |
| | | | 260 | | | | | 265 | | | | | 270 | | | |
| Ile | Glu | Met | Asp | Ser | Gly | Asp | Glu | Ala | | | | | | | | |
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<212> PRT

<213> homo sapiens

<400> 174

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| Ile | Ile | Asp | Ile | Tyr | Ile | Lys | Asn | Thr | Ser | Lys | Lys | Ala | Leu | Val | Ser | |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | | |
| Ala | Ile | Lys | Lys | Leu | Tyr | Val | Leu | Gly | Tyr | Ile | Phe | Phe | Leu | Thr | Gly | |
| | | | 20 | | | | | 25 | | | | | 30 | | | |
| Lys | Ser | Gln | Trp | Lys | His | Phe | Cys | Ser | Ile | Ser | Arg | Asn | Phe | Leu | Leu | |
| | | 35 | | | | | 40 | | | | | 45 | | | | |
| Gly | Lys | Val | Gly | Arg | Lys | Leu | Pro | Asp | His | Ile | Leu | Arg | Leu | His | Leu | |

| | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|
| | 50 | | | | | 55 | | | | | | 60 | | | | |
| His | Cys | Pro | Phe | Gln | Tyr | Pro | Ser | Leu | Leu | Tyr | Gln | Gln | Leu | Ala | Thr | |
| 65 | | | | | 70 | | | | | 75 | | | | | 80 | |
| Arg | Cys | Leu | Pro | Ser | Val | Leu | Leu | Pro | Ile | Ser | Cys | Val | Leu | Ala | Val | |
| | | | | 85 | | | | | 90 | | | | | 95 | | |
| Leu | Ala | Leu | Pro | Val | Ser | | | | | | | | | | | |
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<400> 175

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| Ile | Tyr | Thr | Ser | Lys | Ile | His | Leu | Lys | Arg | His | Trp | Leu | Val | Leu | Leu | |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | | |
| Lys | Ser | Ser | Met | Cys | Ser | Gly | Thr | Phe | Phe | Phe | Leu | Gln | Ala | Lys | Ala | |
| | | | 20 | | | | | 25 | | | | | 30 | | | |
| Ser | Gly | Asn | Ile | Phe | Val | Gln | Phe | Leu | Gly | Ile | Phe | Ser | Trp | Gly | Lys | |
| | | 35 | | | | | 40 | | | | | 45 | | | | |
| Ser | Val | Glu | Ser | Tyr | Leu | Ile | Ile | Phe | Leu | Gly | Phe | Ile | Ser | Thr | Val | |
| | 50 | | | | | 55 | | | | | 60 | | | | | |
| His | Phe | Asn | Ile | His | Leu | Phe | Cys | Ile | Ser | Ser | Ser | Arg | Gln | Asp | Val | |
| 65 | | | | | 70 | | | | | 75 | | | | | 80 | |
| Cys | His | Gln | Cys | Phe | Phe | Gln | Phe | Leu | Ala | Tyr | Leu | Leu | Tyr | Ser | Leu | |
| | | | | 85 | | | | | 90 | | | | | 95 | | |
| Phe | Leu | Phe | Pro | Asp | Val | Phe | Ile | Cys | Asp | Asn | Lys | Ser | Phe | Ala | Glu | |
| | | | 100 | | | | | 105 | | | | | 110 | | | |
| Gly | Leu | Arg | Cys | Val | Lys | Pro | Asn | Ser | Arg | Val | Leu | Phe | His | Ser | Ser | |
| | | 115 | | | | | 120 | | | | | 125 | | | | |
| Gly | Asp | Leu | Pro | Cys | Asp | Trp | Arg | Arg | Ala | Cys | Val | Gln | Ser | Thr | Gly | |
| | 130 | | | | | 135 | | | | | 140 | | | | | |
| Asn | Ser | Arg | | | | | | | | | | | | | | |
| 145 | | | | | | | | | | | | | | | | |

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 <212> PRT
 <213> homo sapiens

<400> 176

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| Glu | Cys | Pro | Leu | Gly | Ala | Arg | Gly | Pro | Trp | Glu | Pro | Arg | His | Pro | Phe | |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | | |
| Pro | Leu | Gly | Arg | Gly | Ala | Arg | Ser | Arg | His | Pro | Cys | Thr | His | Gly | Arg | |
| | | | 20 | | | | | 25 | | | | | 30 | | | |
| Leu | Ala | Pro | Pro | Gln | Ser | Pro | Pro | His | Ser | Gln | Gln | Pro | Phe | His | Ser | |
| | | 35 | | | | | 40 | | | | | 45 | | | | |

| | | | | | | | | | | | | | | | |
|-----------|-----------|-----|-----|-----------|-----------|-----------|-----|-----|-----|-----------|-----------|-----|-----|-----|-----------|
| His | Cys 50 | Pro | Ser | Arg | Ser | Pro 55 | Gln | Pro | Ser | Leu | Arg 60 | Pro | His | Pro | His |
| Pro 65 | Leu | Arg | Ala | Gln | Gly 70 | Cys | Asn | Pro | Ser | Leu 75 | Ser | Thr | Thr | His | Arg 80 |
| Trp | Tyr | Ser | Trp | Gly 85 | | | | | | | | | | | |

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 <212> PRT
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<400> 177

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| Asn 1 | Ala | Leu | Trp | Gly 5 | Pro | Gly | Ala | Pro | Gly 10 | Ser | Pro | Ala | Thr | Leu 15 | Ser |
| His | Leu | Ala | Gly 20 | Val | Pro | Ala | Ala | Ala 25 | Thr | Pro | Ala | Arg | Met 30 | Ala | Gly |
| Trp | His | Pro 35 | Pro | Arg | Ala | Leu | Pro 40 | Thr | Ala | Ser | Ser | Leu 45 | Ser | Thr | Val |
| Thr | Ala 50 | Leu | Pro | Ala | Val | Pro 55 | Ser | Leu | Pro | Tyr | Gly 60 | Leu | Thr | Arg | Thr |
| Pro 65 | Ser | Glu | Pro | Arg | Ala 70 | Ala | Thr | Pro | His | Tyr 75 | Pro | Pro | Arg | Thr | Asp 80 |
| Gly | Thr | Ala | Gly | Ala 85 | Glu | Gln | Pro | His | Val 90 | Glu | Pro | Glu | Arg | Val 95 | Pro |
| Gly | Ala | Arg | Gly 100 | Gln | Asp | Ala | Gly | Gly 105 | Arg | Met | Thr | Ala | Cys 110 | Pro | Cys |
| Leu | Thr | Ser 115 | Trp | Gly | Thr | Thr | Leu 120 | Asp | Arg | Gly | Ile | Gly 125 | Gln | Asp | Pro |

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 <212> PRT
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<400> 178

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| Met 1 | Pro | Phe | Gly | Gly 5 | Gln | Gly | Pro | Leu | Gly 10 | Ala | Pro | Pro | Pro | Phe 15 | Pro |
| Thr | Trp | Pro | Gly 20 | Cys | Pro | Gln | Pro | Pro 25 | Pro | Leu | His | Ala | Trp 30 | Gln | Ala |
| Gly | Thr | Pro 35 | Pro | Glu | Pro | Ser | Pro 40 | Gln | Pro | Ala | Ala | Phe 45 | Pro | Gln | Ser |
| Leu | Pro 50 | Phe | Pro | Gln | Ser | Pro 55 | Ala | Phe | Pro | Thr | Ala 60 | Ser | Pro | Ala | Pro |
| Pro 65 | Gln | Ser | Pro | Gly | Leu 70 | Gln | Pro | Leu | Ile | Ile 75 | His | His | Ala | Gln | Met 80 |

| | | | | | | | | | | | | | | | |
|-----|-----|-----|------------|-----------|-----|-----|-----|------------|-----------|-----|-----|-----|-----|-----------|-----|
| Val | Gln | Leu | Gly | Leu 85 | Asn | Asn | His | Met | Trp 90 | Asn | Gln | Arg | Gly | Ser 95 | Gln |
| Ala | Pro | Glu | Asp 100 | Lys | Thr | Gln | Glu | Ala 105 | Glu | | | | | | |

<210> 179
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<400> 179

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| Gly 1 | Asn | Pro | Glu | Leu 5 | Pro | Trp | Arg | Lys | Phe 10 | Gln | Cys | Gln | His | Ser 15 | Cys |
| Ser | Leu | Trp | Pro 20 | Ser | Pro | Thr | Leu | Trp 25 | Pro | Glu | Ile | Pro | Gln 30 | Ser | Asn |
| Leu | Glu | Pro 35 | Lys | Arg | Thr | Gln | Arg 40 | Thr | Leu | Asp | Pro | Asn 45 | Cys | Pro | Arg |
| Pro | Ser 50 | Pro | Glu | Val | Gly | Val 55 | Thr | Asn | Ser | Ser | Gly 60 | Leu | Arg | His | Met |
| Lys 65 | Lys | Leu | Tyr | Ile | Asn 70 | Pro | Arg | Gln | Ala | Thr 75 | Asn | Pro | | | |

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 <212> PRT
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<400> 180

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| Pro 1 | Pro | Thr | His | Thr 5 | Arg | Gln | Val | Gly | Glu 10 | Glu | Ile | Gln | Ser | Cys 15 | His |
| Gly | Glu | Asn | Ser 20 | Ser | Val | Ser | Ile | Leu 25 | Ala | Pro | Cys | Gly | Pro 30 | Leu | Leu |
| His | Ser | Gly 35 | Gln | Arg | Tyr | His | Ser 40 | Gln | Thr | Trp | Ser | Gln 45 | Lys | Gly | His |
| Lys | Gly 50 | Leu | Ser | Thr | Gln | Thr 55 | Ala | Pro | Asp | Pro | Leu 60 | Gln | Arg | Leu | Gly |

<210> 181
 <211> 206
 <212> PRT
 <213> homo sapiens

<400> 181

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| Arg 1 | Leu | Ser | Cys | Ala 5 | Gly | Thr | Leu | Ser | Gly 10 | Ser | Gly | Pro | His | Pro 15 | Ser |
| Arg | Arg | Leu | Thr 20 | Gln | Gly | Arg | Trp | Val 25 | Arg | Lys | Ser | Arg | Val 30 | Ala | Met |
| Glu | Lys | Ile 35 | Pro | Val | Ser | Ala | Phe 40 | Leu | Leu | Leu | Val | Ala 45 | Leu | Ser | Tyr |

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Thr | Leu | Ala | Arg | Asp | Thr | Thr | Val | Lys | Pro | Gly | Ala | Lys | Lys | Asp | Thr |
| | 50 | | | | | 55 | | | | | 60 | | | | |
| Lys | Asp | Ser | Arg | Pro | Lys | Leu | Pro | Gln | Thr | Leu | Ser | Arg | Gly | Trp | Gly |
| 65 | | | | | 70 | | | | | 75 | | | | | 80 |
| Asp | Gln | Leu | Ile | Trp | Thr | Gln | Thr | Tyr | Glu | Glu | Ala | Leu | Tyr | Lys | Ser |
| | | | | 85 | | | | | 90 | | | | | 95 | |
| Lys | Thr | Ser | Asn | Lys | Pro | Leu | Met | Ile | Ile | His | His | Leu | Asp | Glu | Cys |
| | | | 100 | | | | | 105 | | | | | 110 | | |
| Pro | His | Ser | Gln | Ala | Leu | Lys | Lys | Val | Phe | Ala | Glu | Asn | Lys | Glu | Ile |
| | | 115 | | | | | 120 | | | | | 125 | | | |
| Gln | Lys | Leu | Ala | Glu | Gln | Phe | Val | Leu | Leu | Asn | Leu | Val | Tyr | Glu | Thr |
| | 130 | | | | | 135 | | | | | 140 | | | | |
| Thr | Asp | Lys | His | Leu | Ser | Pro | Asp | Gly | Gln | Tyr | Val | Pro | Arg | Ile | Met |
| 145 | | | | | 150 | | | | | 155 | | | | | 160 |
| Phe | Val | Asp | Pro | Ser | Leu | Thr | Val | Arg | Ala | Asp | Ile | Thr | Gly | Arg | Tyr |
| | | | | 165 | | | | | 170 | | | | | 175 | |
| Ser | Asn | Arg | Leu | Tyr | Ala | Tyr | Glu | Pro | Ala | Asp | Thr | Ala | Leu | Leu | Leu |
| | | | 180 | | | | | 185 | | | | | 190 | | |
| Asp | Asn | Met | Lys | Lys | Ala | Leu | Lys | Leu | Leu | Lys | Thr | Glu | Leu | | |
| | | 195 | | | | | 200 | | | | | 205 | | | |

<210> 182

<211> 206

<212> PRT

<213> homo sapiens

<400> 182

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| Arg | Val | Phe | Gln | Glu | Glu | Glu | Leu | Val | Arg | Arg | Gln | Arg | Asn | Gly | Ala |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Ser | Gly | Pro | Arg | Pro | Gly | Leu | Arg | Arg | Leu | Arg | Gly | Gly | Arg | Arg | Ala |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Val | Arg | Arg | Lys | Glu | Arg | Leu | Leu | His | Arg | Gln | Leu | Pro | Ala | Val | His |
| | | 35 | | | | | 40 | | | | | 45 | | | |
| Lys | Arg | Gly | Ala | Arg | Val | Lys | Leu | Ser | Ser | Pro | Glu | Arg | Asp | Val | Glu |
| | 50 | | | | | 55 | | | | | 60 | | | | |
| Arg | Asp | Val | Phe | Leu | Tyr | Arg | Ala | Tyr | Leu | Ala | Gln | Arg | Lys | Phe | Gly |
| 65 | | | | | 70 | | | | | 75 | | | | | 80 |
| Val | Val | Leu | Asp | Glu | Ile | Lys | Pro | Ser | Ser | Ala | Pro | Glu | Leu | Gln | Ala |
| | | | | 85 | | | | | 90 | | | | | 95 | |
| Val | Arg | Met | Phe | Ala | Asp | Tyr | Leu | Ala | His | Glu | Ser | Arg | Arg | Asp | Ser |
| | | | 100 | | | | | 105 | | | | | 110 | | |
| Ile | Val | Ala | Glu | Leu | Asp | Arg | Glu | Met | Ser | Arg | Ser | Val | Asp | Val | Thr |
| | | 115 | | | | | 120 | | | | | 125 | | | |
| Asn | Thr | Thr | Phe | Leu | Leu | Met | Ala | Ala | Ser | Ile | Tyr | Leu | His | Asp | Gln |
| | 130 | | | | | 135 | | | | | 140 | | | | |

| | | | | | | | | | | | | | | | |
|------------|-----|------------|------------|------------|------------|-----|------------|------------|------------|------------|-----|------------|------------|------------|------------|
| Asn 145 | Pro | Asp | Ala | Ala | Leu 150 | Arg | Ala | Leu | His | Gln 155 | Gly | Asp | Ser | Leu | Glu 160 |
| Cys | Thr | Ala | Met | Thr 165 | Val | Gln | Ile | Leu | Leu 170 | Lys | Leu | Asp | Arg | Leu 175 | Asp |
| Leu | Ala | Arg | Lys 180 | Glu | Leu | Lys | Arg | Met 185 | Gln | Asp | Leu | Asp | Glu 190 | Asp | Ala |
| Thr | Leu | Thr 195 | Gln | Leu | Lys | Val | Leu 200 | Val | Ser | Leu | Gln | Arg 205 | Val | | |

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<400> 183

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| Leu 1 | Pro | Arg | Pro | Arg 5 | Glu | Ser | Glu | Gly | Gln 10 | His | Arg | Gly | Arg | Ala 15 | Gly |
| Pro | Arg | Asp | Glu 20 | Gln | Glu | Arg | Gly | Arg 25 | Asp | Gln | His | His | Leu 30 | Pro | Ala |
| His | Gly | Arg 35 | Leu | His | Leu | Ser | Pro 40 | Arg | Pro | Glu | Pro | Gly 45 | Cys | Arg | Pro |
| Ala | Cys 50 | Ala | Ala | Pro | Gly | Gly 55 | Gln | Pro | Gly | Val | His 60 | Ser | His | Asp | Ser |
| Ala 65 | Asp | Pro | Ala | Glu | Ala 70 | Gly | Pro | Pro | Gly | Pro 75 | Arg | Pro | Glu | Gly | Ala 80 |
| Glu | Glu | Asn | Ala | Gly 85 | Pro | Gly | Arg | Gly | Cys 90 | His | Pro | His | Pro | Ala 95 | Gln |
| Gly | Leu | Gly | Lys 100 | Leu | Ala | Thr | Gly | Val 105 | Lys | Ala | Gln | Gly | Ser 110 | Phe | |

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 <212> PRT
 <213> homo sapiens

<400> 184

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| Gly 1 | Thr | Ile | Leu | Pro 5 | Ile | Pro | Glu | Ile | Arg 10 | Arg | Ile | Leu | Glu | Leu 15 | Leu |
| His | Pro | Leu | Gln 20 | Ala | Tyr | Gln | Asp | Leu 25 | Glu | Leu | Gly | Glu | Gly 30 | Gly | Ile |
| Leu | Val | Gln 35 | Val | Leu | His | Ser | Leu 40 | Gln | Leu | Leu | Pro | Gly 45 | Glu | Val | Gln |
| Ala | Val 50 | Gln | Leu | Gln | Gln | Asp 55 | Leu | His | Cys | His | Gly 60 | Cys | Ala | Leu | Gln |
| Ala 65 | Val | Pro | Leu | Val | Gln 70 | Arg | Thr | Gln | Gly | Gly 75 | Ile | Arg | Val | Leu | Val 80 |

| | | | | | | | | | | | | | | | | |
|------------|------------|------------|------------|------------|------------|------------|------------|------------|-----------|------------|------------|------------|------------|-----------|------------|--|
| Val | Glu | Ile | Asp | Gly 85 | Gly | Gly | His | Glu | Gln 90 | Glu | Gly | Gly | Val | Gly 95 | His | |
| Val | His | Ala | Pro 100 | Ala | His | Leu | Ser | Val 105 | Gln | Leu | Gly | His | Asp 110 | Ala | Val | |
| Pro | Pro | Thr 115 | Leu | Val | Gly | Glu | Val 120 | Val | Ser | Lys | His | Ala 125 | His | Gly | Leu | |
| Glu | Leu 130 | Arg | Gly | Arg | Gly | Gly 135 | Leu | Asp | Leu | Ile | Gln 140 | Asp | His | Thr | Glu | |
| Leu 145 | Pro | Leu | Arg | Gln | Val 150 | Arg | Ser | Ile | Gln | Glu 155 | Asp | Val | Pro | Leu | His 160 | |
| Val | Ser | Leu | Trp | Ala 165 | | | | | | | | | | | | |

<210> 185
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 <212> PRT
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<400> 185

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| Leu 1 | Leu | Ser | Met | Arg 5 | Met | Ile | Leu | Lys | Pro 10 | Gln | Ser | Phe | Met | Ile 15 | Leu | |
| Met | Met | Leu | Arg 20 | Ser | Ser | Asn | Arg | Val 25 | Thr | Trp | Lys | Leu | Leu 30 | Leu | Ile | |
| Gly | Leu | Asp 35 | Tyr | Ile | Arg | Tyr | Gln 40 | Met | Glu | Asn | Gln | Lys 45 | Thr | Ser | Leu | |
| Leu 50 | Leu | Met | Glu | Asn | Ser | Lys 55 | Thr | Arg | Leu | Leu | Leu 60 | Leu | Lys | Leu | Leu | |
| Asn 65 | Pro | Leu | Ile | Asn | Val 70 | Gly | Lys | His | Cys | Leu 75 | | | | | | |

<210> 186
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<400> 186

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| Arg 1 | Thr | Val | Ile | Asp 5 | Ala | Met | Ser | Ala | Leu 10 | Leu | Arg | Leu | Leu | Arg 15 | Thr | |
| Gly | Ala | Pro | Ala 20 | Ala | Ala | Cys | Leu | Arg 25 | Leu | Gly | Thr | Ser | Ala 30 | Gly | Thr | |
| Gly | Ser | Arg 35 | Arg | Ala | Met | Ala | Leu 40 | Tyr | His | Thr | Glu | Glu 45 | Arg | Gly | Gln | |
| Pro | Cys 50 | Ser | Gln | Asn | Tyr | Arg 55 | Leu | Phe | Phe | Lys | Asn 60 | Val | Thr | Gly | His | |
| Tyr 65 | Ile | Ser | Pro | Phe | His 70 | Asp | Ile | Pro | Leu | Lys 75 | Val | Asn | Ser | Lys | Glu 80 | |
| Glu | Asn | Gly | Ile | Pro | Met | Lys | Lys | Ala | Arg | Asn | Asp | Glu | Tyr | Glu | Asn | |

| | | | | 85 | | | | 90 | | | | 95 | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Phe | Asn | Met | Ile | Val | Glu | Ile | Pro | Arg | Trp | Thr | Asn | Ala | Lys | Met |
| | | | 100 | | | | | 105 | | | | | 110 | | |
| Glu | Ile | Ala | Thr | Lys | Glu | Pro | Met | Asn | Pro | Ile | Lys | Gln | Tyr | Val | Lys |
| | | 115 | | | | | 120 | | | | | 125 | | | |
| Asp | Gly | Lys | Leu | Arg | Tyr | Val | Ala | Asn | Ile | Phe | Pro | Tyr | Lys | Gly | Tyr |
| | 130 | | | | | 135 | | | | | 140 | | | | |
| Ile | Trp | Asn | Tyr | Gly | Thr | Leu | Pro | Gln | Thr | Trp | Glu | Asp | Pro | His | Glu |
| 145 | | | | | 150 | | | | | 155 | | | | | 160 |
| Lys | Asp | Lys | Ser | Thr | Asn | Cys | Phe | Gly | Asp | Asn | Asp | Pro | Ile | Asp | Val |
| | | | | 165 | | | | | 170 | | | | | 175 | |
| Cys | Glu | Ile | Gly | Ser | Lys | Ile | Leu | Ser | Cys | Gly | Glu | Val | Ile | His | Val |
| | | | 180 | | | | | 185 | | | | | 190 | | |
| Lys | Ile | Leu | Gly | Ile | Leu | Ala | Leu | Ile | Asp | Glu | Gly | Glu | Thr | Asp | Trp |
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| Lys | Leu | Ile | Ala | Ile | Asn | Ala | Asn | Asp | Pro | Glu | Ala | Ser | Lys | Phe | His |
| | 210 | | | | | 215 | | | | | 220 | | | | |
| Asp | Ile | Asp | Asp | Val | Lys | Lys | Phe | Lys | Pro | Gly | Tyr | Leu | Glu | Ala | Thr |
| 225 | | | | | 230 | | | | | 235 | | | | | 240 |
| Leu | Asn | Trp | Phe | Arg | Leu | Tyr | Lys | Val | Pro | Asp | Gly | Lys | Pro | Glu | Asn |
| | | | | 245 | | | | | 250 | | | | | 255 | |
| Gln | Phe | Ala | Phe | Asn | Gly | Glu | Phe | Lys | Asn | Lys | Ala | Phe | Ala | Leu | Glu |
| | | | 260 | | | | | 265 | | | | | 270 | | |
| Val | Ile | Lys | Ser | Thr | His | Gln | Cys | Trp | Lys | Ala | Leu | Leu | Met | Lys | Lys |
| | | 275 | | | | | 280 | | | | | 285 | | | |
| Cys | Asn | Gly | Gly | Ala | Ile | Asn | Cys | Thr | Asn | Val | Gln | Ile | Ser | Asp | Ser |
| | 290 | | | | | 295 | | | | | 300 | | | | |
| Pro | Phe | Arg | Cys | Thr | Gln | Glu | Glu | Ala | Arg | Ser | Leu | Val | Glu | Ser | Val |
| 305 | | | | | 310 | | | | | 315 | | | | | 320 |
| Ser | Ser | Ser | Pro | Asn | Lys | Glu | Ser | Asn | Glu | Glu | Glu | Gln | Val | Trp | His |
| | | | | 325 | | | | | 330 | | | | | 335 | |
| Phe | Leu | Gly | Lys | | | | | | | | | | | | |
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| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Gly | Asn | Leu | His | Phe | Ser | Ile | Cys | Pro | Pro | Arg | Tyr | Phe | Tyr | Asn | His |
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| | | | | | | | | | | | | | | | |
|-----------|------------|------------|------------|-----------|-----------|-----------|------------|------------|-----------|-----------|-----------|------------|------------|-----------|-----------|
| Ile | Lys | Gln 35 | Ile | Leu | Ile | Phe | Ile 40 | Ile | Ser | Cys | Phe | Leu 45 | His | Arg | Asn |
| Ala | Ile 50 | Phe | Leu | Phe | Arg | Val 55 | His | Leu | Gln | Arg | Asn 60 | Ile | Met | Lys | Gly |
| Gly 65 | Asn | Val | Val | Thr | Ser 70 | Tyr | Ile | Leu | Lys | Glu 75 | Glu | Ala | Val | Ile | Leu 80 |
| Arg | Ala | Gly | Leu | Ala 85 | Ala | Leu | Leu | Ser | Val 90 | Val | Gln | Gly | His | Ser 95 | Thr |
| Ala | Arg | Pro | Gly 100 | Pro | Cys | Thr | Gly | Pro 105 | Gln | Pro | Gln | Ala | Arg 110 | Ser | Gly |
| Trp | Gly | Thr 115 | Arg | Ala | Gln | Gln | Pro 120 | Gln | Gln | Arg | Ala | His 125 | Gly | Val | Asn |
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| Gly | Arg | Val | Val 20 | Tyr | Ser | Pro | Gly | Glu 25 | Pro | Leu | Ala | Gly | Thr 30 | Val | Arg |
| Val | Arg | Leu 35 | Gly | Ala | Pro | Leu | Pro 40 | Phe | Arg | Ala | Ile | Arg 45 | Val | Thr | Cys |
| Ile | Gly 50 | Ser | Cys | Gly | Val | Ser 55 | Asn | Lys | Ala | Asn | Asp 60 | Thr | Ala | Trp | Val |
| Val 65 | Glu | Glu | Gly | Tyr | Phe 70 | Asn | Ser | Ser | Leu | Ser 75 | Leu | Ala | Asp | Lys | Gly 80 |
| Ser | Leu | Pro | Ala | Gly 85 | Glu | His | Ser | Phe | Pro 90 | Phe | Gln | Phe | Leu | Leu 95 | Pro |
| Ala | Thr | Ala | Pro 100 | Thr | Ser | Phe | Glu | Gly 105 | Pro | Phe | Gly | Lys | Ile 110 | Val | His |
| Gln | Val | Arg 115 | Ala | Ala | Ile | His | Thr 120 | Pro | Arg | Phe | Ser | Lys 125 | Asp | His | Lys |
| Cys | Ser 130 | Leu | Val | Phe | Tyr | Ile 135 | Leu | Ser | Pro | Leu | Asn 140 | Leu | Asn | Ser | Ile |
| Pro 145 | Asp | Ile | Glu | Gln | Pro 150 | Asn | Val | Ala | Ser | Ala 155 | Thr | Lys | Lys | Phe | Ser 160 |
| Tyr | Lys | Leu | Val | Lys 165 | Thr | Gly | Ser | Val | Val 170 | Leu | Thr | Ala | Ser | Thr 175 | Asp |
| Leu | Arg | Gly | Tyr 180 | Val | Val | Gly | Gln | Ala 185 | Leu | Gln | Leu | His | Ala 190 | Asp | Val |

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|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Asn | Gln | Ser | Gly | Lys | Asp | Thr | Ser | Pro | Val | Val | Ala | Ser | Leu | Leu |
| | | 195 | | | | | 200 | | | | | 205 | | | |
| Gln | Lys | Val | Ser | Tyr | Lys | Ala | Lys | Arg | Trp | Ile | His | Asp | Val | Arg | Thr |
| | 210 | | | | | 215 | | | | | 220 | | | | |
| Ile | Ala | Glu | Val | Glu | Gly | Ala | Gly | Val | Lys | Ala | Trp | Arg | Arg | Ala | Gln |
| 225 | | | | | 230 | | | | | 235 | | | | | 240 |
| Trp | His | Glu | Gln | Ile | Leu | Val | Pro | Ala | Leu | Pro | Gln | Ser | Ala | Leu | Pro |
| | | | | 245 | | | | | 250 | | | | | 255 | |
| Gly | Cys | Ser | Leu | Ile | His | Ile | Asp | Tyr | Tyr | Leu | Gln | Val | Ser | Leu | Lys |
| | | | 260 | | | | | 265 | | | | | 270 | | |
| Ala | Pro | Glu | Ala | Thr | Val | Thr | Leu | Pro | Val | Phe | Ile | Gly | Asn | Ile | Ala |
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| Val | Asn | His | Ala | Pro | Val | Ser | Pro | Arg | Pro | Gly | Leu | Gly | Leu | Pro | Pro |
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| Gly | Ala | Pro | Pro | Leu | Val | Val | Pro | Ser | Ala | Pro | Pro | Gln | Glu | Glu | Ala |
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| Glu | Ala | Glu | Ala | Ala | Ala | Gly | Gly | Pro | His | Phe | Leu | Asp | Pro | Val | Phe |
| | | | | 325 | | | | | 330 | | | | | 335 | |
| Leu | Ser | Thr | Lys | Ser | His | Ser | Gln | Arg | Gln | Pro | Leu | Leu | Ala | Thr | Leu |
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| Ser | Ser | Val | Pro | Gly | Ala | Pro | Glu | Pro | Cys | Pro | Gln | Asp | Gly | Ser | Pro |
| | | 355 | | | | | 360 | | | | | 365 | | | |
| Ala | Ser | His | Pro | Leu | His | Pro | Pro | Leu | Cys | Ile | Ser | Thr | Gly | Ala | Thr |
| | 370 | | | | | 375 | | | | | 380 | | | | |
| Val | Pro | Tyr | Phe | Ala | Glu | Gly | Ser | Gly | Gly | Pro | Val | Pro | Thr | Thr | Ser |
| 385 | | | | | 390 | | | | | 395 | | | | | 400 |
| Thr | Leu | Ile | Leu | Pro | Pro | Glu | Tyr | Ser | Ser | Trp | Gly | Tyr | Pro | Tyr | Glu |
| | | | | 405 | | | | | 410 | | | | | 415 | |
| Ala | Pro | Pro | Ser | Tyr | Glu | Gln | Ser | Cys | Gly | Gly | Val | Glu | Pro | Ser | Leu |
| | | | 420 | | | | | 425 | | | | | 430 | | |
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| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Pro | Pro | Pro | Gln | Pro | Gln | Gly | Glu | Glu | Gly | Gly | Cys | Arg | Gly | Ala | Gly |
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| Arg | Gly | Trp | Ala | Gly | Pro | Glu | Trp | Ala | Arg | Leu | Gly | Gln | Glu | Arg | Arg |

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| His | Glu | Ala | Leu | Gly | Ala | Pro | Val | Pro | Gly | Gln | Arg | Pro | Gly | Leu | Pro | |
| | 50 | | | | | 55 | | | | | 60 | | | | | |
| Gly | Glu | Gly | Ser | Thr | Gly | Ser | Ala | Leu | Arg | Gly | Gln | Ala | Gly | Phe | His | |
| 65 | | | | | 70 | | | | | 75 | | | | | 80 | |
| Ala | Ala | Ala | Ala | Leu | Leu | Ile | Arg | Arg | Trp | Gly | Leu | Ile | Gly | Val | Ala | |
| | | | | 85 | | | | | 90 | | | | | 95 | | |
| Pro | Arg | Thr | Val | Leu | Trp | Arg | Lys | Asn | Gln | Gly | Ala | Gly | Ser | Gly | His | |
| | | | 100 | | | | | 105 | | | | | 110 | | | |
| Trp | Pro | Pro | Gly | Ala | Leu | Cys | Lys | Val | Gly | Asp | Ser | Gly | Thr | Cys | | |
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| Ala | Ala | Glu | Ile | Ser | Ala | Gly | Cys | Glu | Asp | His | Ala | Ala | Arg | Leu | His | |
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| Gln | Leu | Val | Gly | Glu | Leu | Leu | Gly | Gly | Arg | Gly | His | Val | Gly | Leu | Leu | |
| | | 35 | | | | | 40 | | | | | 45 | | | | |
| Asn | Val | Trp | Asp | Ala | Val | Gln | Val | Gln | Gly | Ala | Gln | Asp | Ile | Glu | His | |
| | 50 | | | | | 55 | | | | | 60 | | | | | |
| Glu | Ala | Ala | Leu | Val | Ile | Leu | Gly | Lys | Pro | Trp | Arg | Val | Asp | Gly | Gly | |
| 65 | | | | | 70 | | | | | 75 | | | | | 80 | |
| Pro | His | Leu | Val | His | Asp | Leu | Pro | Glu | Arg | Thr | Leu | Lys | Gly | Arg | Gly | |
| | | | | 85 | | | | | 90 | | | | | 95 | | |
| Cys | Ser | Gly | Arg | Lys | Gln | Glu | Leu | Glu | Gly | Glu | Ala | Val | Leu | Ser | Ser | |
| | | | 100 | | | | | 105 | | | | | 110 | | | |
| Gly | Gln | Ala | Pro | Leu | Val | Cys | Gln | Arg | Gln | Gly | Thr | Val | Glu | Val | Thr | |
| | | 115 | | | | | 120 | | | | | 125 | | | | |
| Leu | Leu | His | Tyr | Pro | Arg | Cys | Val | Ile | Ser | Leu | Val | Gly | Asp | Pro | Ala | |
| | 130 | | | | | 135 | | | | | 140 | | | | | |
| Gly | Thr | Tyr | Ala | Gly | His | Pro | Asp | Gly | Ser | Glu | Arg | Gln | Arg | Cys | Pro | |
| 145 | | | | | 150 | | | | | 155 | | | | | 160 | |
| Gln | Ala | His | Ala | His | Gly | Pro | Ser | Gln | Arg | Leu | Pro | Gly | Ala | Val | Asp | |
| | | | | 165 | | | | | 170 | | | | | 175 | | |
| Asp | Ala | Ala | Val | Ala | Gln | Ala | Asp | Leu | Glu | Glu | Leu | His | Ser | Pro | His | |
| | | | 180 | | | | | 185 | | | | | 190 | | | |
| Ala | Ala | Ala | Ser | Pro | Ala | Ser | Arg | Ala | Ala | Thr | Pro | Pro | Pro | Ala | Ala | |
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| Ser | Glu | Pro | Glu 20 | Arg | Lys | Arg | Ala | Arg 25 | Thr | Asp | Glu | Val | Pro 30 | Ala | Gly |
| Gly | Ser | Arg 35 | Ser | Glu | Ala | Glu | Asp 40 | Glu | Asp | Asp | Glu | Asp 45 | Tyr | Val | Pro |
| Tyr | Val 50 | Pro | Leu | Arg | Gln | Arg 55 | Arg | Gln | Leu | Leu | Leu 60 | Gln | Lys | Leu | Leu |
| Gln 65 | Arg | Arg | Arg | Lys | Gly 70 | Ala | Ala | Glu | Glu | Glu 75 | Gln | Gln | Asp | Ser | Gly 80 |
| Ser | Glu | Pro | Arg | Gly 85 | Asp | Glu | Asp | Asp | Ile 90 | Pro | Leu | Gly | Pro | Gln 95 | Ser |
| Asn | Val | Ser | Leu 100 | Leu | Asp | Gln | His | Gln 105 | His | Leu | Lys | Glu | Lys 110 | Ala | Glu |
| Ala | Arg | Lys 115 | Glu | Ser | Ala | Lys | Glu 120 | Lys | Gln | Leu | Lys | Glu 125 | Glu | Glu | Lys |
| Ile | Leu 130 | Glu | Ser | Val | Ala | Glu 135 | Gly | Arg | Ala | Leu | Met 140 | Ser | Val | Lys | Glu |
| Met 145 | Ala | Lys | Gly | Ile | Thr 150 | Tyr | Asp | Asp | Pro | Ile 155 | Lys | Thr | Ser | Trp | Thr 160 |
| Pro | Pro | Arg | Tyr | Val 165 | Leu | Ser | Met | Ser | Glu 170 | Glu | Arg | His | Glu | Arg 175 | Val |
| Arg | Lys | Lys | Tyr 180 | His | Ile | Leu | Val | Glu 185 | Gly | Asp | Gly | Ile | Pro 190 | Pro | Pro |
| Ile | Lys | Ser 195 | Phe | Lys | Glu | Met | Lys 200 | Phe | Pro | Ala | Ala | Ile 205 | Leu | Arg | Gly |
| Leu | Lys 210 | Lys | Lys | Gly | Ile | His 215 | His | Pro | Thr | Pro | Ile 220 | Gln | Ile | Gln | Gly |
| Ile 225 | Pro | Thr | Ile | Leu | Ser 230 | Gly | Arg | Asp | Met | Ile 235 | Gly | Ile | Ala | Phe | Thr 240 |
| Gly | Ser | Gly | Lys | Thr 245 | Leu | Val | Phe | Thr | Leu 250 | Pro | Val | Ile | Met | Phe 255 | Cys |
| Leu | Glu | Gln | Glu 260 | Lys | Arg | Leu | Pro | Phe 265 | Ser | Lys | Arg | Glu | Gly 270 | Pro | Tyr |
| Gly | Leu | Ile 275 | Ile | Cys | Pro | Ser | Arg 280 | Glu | Leu | Ala | Arg | Gln 285 | Thr | His | Gly |

| | | | | | | | | | | | | | | | |
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| Ile | Leu | Glu | Tyr | Tyr | Cys | Arg | Leu | Leu | Gln | Glu | Asp | Ser | Ser | Pro | Leu |
| | 290 | | | | | 295 | | | | | 300 | | | | |
| Leu | Arg | Cys | Ala | Leu | Cys | Ile | Gly | Gly | Met | Ser | Val | Lys | Glu | Gln | Met |
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| Glu | Thr | Ile | Arg | His | Gly | Val | His | Met | Met | Val | Ala | Thr | Pro | Gly | Arg |
| | | | | 325 | | | | | 330 | | | | | 335 | |
| Leu | Met | Asp | Leu | Leu | Gln | Lys | Lys | Met | Val | Ser | Leu | Asp | Ile | Cys | Arg |
| | | | 340 | | | | | 345 | | | | | 350 | | |
| Tyr | Leu | Ala | Leu | Asp | Glu | Ala | Asp | Arg | Met | Ile | Asp | Met | Gly | Phe | Glu |
| | | 355 | | | | | 360 | | | | | 365 | | | |
| Gly | Asp | Ile | Arg | Thr | Ile | Phe | Ser | Tyr | Phe | Lys | Gly | Gln | Arg | Gln | Thr |
| | 370 | | | | | 375 | | | | | 380 | | | | |
| Leu | Leu | Phe | Ser | Ala | Thr | Met | Pro | Lys | Lys | Ile | Gln | Asn | Phe | Ala | Lys |
| 385 | | | | | 390 | | | | | 395 | | | | | 400 |
| Ser | Ala | Leu | Val | Lys | Pro | Val | Thr | Ile | Asn | Val | Gly | Arg | Ala | Gly | Ala |
| | | | | 405 | | | | | 410 | | | | | 415 | |
| Ala | Ser | Leu | Asp | Val | Ile | Gln | Glu | Val | Glu | Tyr | Val | Lys | Glu | Glu | Ala |
| | | | 420 | | | | | 425 | | | | | 430 | | |
| Lys | Met | Val | Tyr | Leu | Leu | Glu | Cys | Leu | Gln | Lys | Thr | Pro | Pro | Pro | Val |
| | | 435 | | | | | 440 | | | | | 445 | | | |
| Leu | Ile | Phe | Ala | Glu | Lys | Lys | Ala | Asp | Val | Asp | Ala | Ile | His | Glu | Tyr |
| | 450 | | | | | 455 | | | | | 460 | | | | |
| Leu | Leu | Leu | Lys | Gly | Val | Glu | Ala | Val | Ala | Ile | His | Gly | Gly | Lys | Asp |
| 465 | | | | | 470 | | | | | 475 | | | | | 480 |
| Gln | Glu | Glu | Arg | Thr | Lys | Ala | Ile | Glu | Ala | Phe | Arg | Glu | Gly | Lys | Lys |
| | | | | 485 | | | | | 490 | | | | | 495 | |
| Asp | Val | Leu | Val | Ala | Thr | Asp | Val | Ala | Ser | Lys | Gly | Leu | Asp | Phe | Pro |
| | | | 500 | | | | | 505 | | | | | 510 | | |
| Ala | Ile | Gln | His | Val | Ile | Asn | Tyr | Asp | Met | Pro | Glu | Glu | Ile | Glu | Asn |
| | | 515 | | | | | 520 | | | | | 525 | | | |
| Tyr | Val | His | Arg | Ile | Gly | Arg | Thr | Gly | Arg | Ser | Gly | Asn | Thr | Gly | Ile |
| | 530 | | | | | 535 | | | | | 540 | | | | |
| Ala | Thr | Thr | Phe | Ile | Asn | Lys | Ala | Cys | Asp | Glu | Ser | Val | Leu | Met | Asp |
| 545 | | | | | 550 | | | | | 555 | | | | | 560 |
| Leu | Lys | Ala | Leu | Leu | Leu | Glu | Ala | Lys | Gln | Lys | Val | Pro | Pro | Val | Leu |
| | | | | 565 | | | | | 570 | | | | | 575 | |
| Gln | Val | Leu | His | Cys | Gly | Asp | Glu | Ser | Met | Leu | Asp | Ile | Gly | Gly | Glu |
| | | | 580 | | | | | 585 | | | | | 590 | | |
| Arg | Gly | Cys | Ala | Phe | Cys | Gly | Gly | Leu | Gly | His | Arg | Ile | Thr | Asp | Cys |
| | | 595 | | | | | 600 | | | | | 605 | | | |
| Pro | Lys | Leu | Glu | Ala | Met | Gln | Thr | Lys | Gln | Val | Ser | Asn | Ile | Gly | Arg |
| | 610 | | | | | 615 | | | | | 620 | | | | |

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| 1 | | | | 5 | | | | 10 | | | | | | 15 | |
| Met | Ser | Pro | Cys | Trp | Thr | Leu | Glu | Glu | Ser | Ala | Ala | Val | Pro | Ser | Ala |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Gly | Ala | Trp | Val | Ile | Gly | Ser | Leu | Thr | Ala | Pro | Asn | Ser | Arg | Leu | Cys |
| | | 35 | | | | | 40 | | | | | 45 | | | |
| Arg | Pro | Ser | Arg | Ser | Ala | Thr | Ser | Val | Ala | Arg | Thr | Thr | Trp | Pro | Thr |
| | 50 | | | | | 55 | | | | | 60 | | | | |
| Ala | Pro | Trp | Thr | Ser | Glu | Pro | Thr | Val | Phe | Pro | Ser | Leu | Gln | Glu | Ala |
| 65 | | | | | 70 | | | | | 75 | | | | | 80 |
| Ser | Val | Pro | Lys | Thr | Ala | Thr | Ser | Leu | His | Ile | Gln | Gln | Pro | Pro | Gly |
| | | | | 85 | | | | | 90 | | | | | 95 | |
| Gln | Asn | Gln | His | Phe | Ser | Ser | Ala | Gly | Leu | Glu | Trp | Ala | Arg | Leu | Val |
| | | | 100 | | | | | 105 | | | | | 110 | | |
| Leu | Ala | Ala | Cys | Ser | Leu | Cys | Ser | Ser | Glu | Leu | Leu | Phe | Leu | Phe | Pro |
| | | 115 | | | | | 120 | | | | | 125 | | | |
| Phe | Thr | Pro | Ala | Ala | Ile | Lys | Ala | Gln | Thr | Ser | Ser | Pro | Lys | Lys | Lys |
| | 130 | | | | | 135 | | | | | 140 | | | | |
| Lys | Lys | Lys | | | | | | | | | | | | | |
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 <213> homo sapiens

<400> 193

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| Asp | Ile | Leu | Leu | Ala | Leu | Pro | Glu | Cys | Leu | Asp | Gly | Leu | Ser | Pro | Phe |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Leu | Leu | Val | Phe | Ala | Pro | Met | Asp | Gly | Tyr | Gly | Leu | Asn | Pro | Leu | Glu |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Gln | Gln | Val | Leu | Val | Asp | Gly | Val | His | Val | Cys | Leu | Leu | Leu | Cys | Lys |
| | | 35 | | | | | 40 | | | | | 45 | | | |
| Asp | Glu | Tyr | Arg | Arg | Gly | Cys | Leu | Leu | Gln | Ala | Leu | Glu | Gln | Val | His |
| | 50 | | | | | 55 | | | | | 60 | | | | |
| His | Leu | Gly | Leu | Leu | Leu | His | Ile | Phe | Tyr | Leu | Leu | Asp | Asp | Ile | Gln |
| 65 | | | | | 70 | | | | | 75 | | | | | 80 |

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|------------|------------|------------|------------|-----------|------------|------------|------------|------------|-----------|-----|------------|------------|------------|-----------|-----|
| Ala | Gly | Ser | Pro | Ser 85 | Ala | Pro | His | Ile | Asp 90 | Gly | His | Arg | Leu | Tyr 95 | Lys |
| Gly | Thr | Leu | Ser 100 | Lys | Val | Leu | Asn | Leu 105 | Leu | Arg | His | Gly | Gly 110 | Thr | Glu |
| Glu | Gln | Gly 115 | Leu | Ser | Leu | Ala | Leu 120 | Glu | Val | Gly | Glu | Asp 125 | Gly | Thr | Asp |
| Val | Thr 130 | Leu | Glu | Ala | His | Val 135 | Asp | His | Ala | Val | Ser 140 | Leu | Val | Gln | Gly |
| Gln 145 | Val | Ala | Thr | Asp | Val 150 | | | | | | | | | | |

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| Glu 1 | Ala | Pro | Ala | Ala 5 | Ala | Arg | Thr | Gln | Ser 10 | Pro | Ala | Ala | Ala | Ala 15 | Gln |
| Arg | Gly | Asp | Asn 20 | Val | Tyr | Val | Val | Thr 25 | Glu | Val | Leu | Gln | Thr 30 | Gln | Lys |
| Glu | Val | Glu 35 | Val | Thr | Arg | Thr | His 40 | Lys | Arg | Glu | Gly | Ser 45 | Gly | Arg | Phe |
| Ser | Leu 50 | Pro | Gly | Ala | Thr | Cys 55 | Leu | Gln | Gly | Glu | Gly 60 | Gln | Gly | His | Leu |
| Ser 65 | Gln | Lys | Lys | Thr | Val 70 | Thr | Ile | Pro | Ser | Gly 75 | Ser | Thr | Leu | Ala | Phe 80 |
| Arg | Val | Ala | Gln | Leu 85 | Val | Ile | Asp | Ser | Asp 90 | Leu | Asp | Val | Leu | Leu 95 | Phe |
| Pro | Asp | Lys | Lys 100 | Gln | Arg | Thr | Phe | Gln 105 | Pro | Pro | Ala | Thr | Gly 110 | His | Lys |
| Arg | Ser | Thr 115 | Ser | Glu | Gly | Ala | Trp 120 | Pro | Gln | Leu | Pro | Ser 125 | Gly | Leu | Ser |
| Met | Met 130 | Arg | Cys | Leu | His | Asn 135 | Phe | Leu | Thr | Asp | Gly 140 | Val | Pro | Ala | Glu |
| Gly 145 | Ala | Phe | Thr | Glu | Asp 150 | Phe | Gln | Gly | Leu | Arg 155 | Ala | Glu | Val | Glu | Thr 160 |
| Ile | Ser | Lys | Glu | Leu 165 | Glu | Leu | Leu | Asp | Arg 170 | Glu | Leu | Cys | Gln | Leu 175 | Leu |
| Leu | Glu | Gly | Leu 180 | Glu | Gly | Val | Leu | Arg 185 | Asp | Gln | Leu | Ala | Leu 190 | Arg | Ala |
| Leu | Glu | Glu 195 | Ala | Leu | Glu | Gln | Gly 200 | Gln | Ser | Leu | Gly | Pro 205 | Val | Glu | Pro |
| Leu | Asp 210 | Gly | Pro | Ala | Gly | Ala 215 | Val | Leu | Glu | Cys | Leu 220 | Val | Leu | Ser | Ser |

195
 244
 PRT
 homo sapiens
 195

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|--------------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Gly 225 | Met | Leu | Val | Pro | Glu 230 | Leu | Ala | Ile | Pro | Val 235 | Val | Tyr | Leu | Leu | Gly 240 |
| Ala | Leu | Thr | Met | Leu 245 | Ser | Glu | Thr | Gln | His 250 | Lys | Leu | Leu | Ala | Glu 255 | Ala |
| Leu | Glu | Ser | Gln 260 | Thr | Leu | Leu | Gly | Pro 265 | Leu | Glu | Leu | Val | Gly 270 | Ser | Leu |
| Leu | Glu | Gln 275 | Ser | Ala | Pro | Trp | Gln 280 | Glu | Arg | Arg | Pro | Cys 285 | Pro | Cys | Pro |
| Pro | Gly 290 | Ser | Trp | Gly | Thr | Ala 295 | Gly | Ala | Lys | Glu | His 300 | Arg | Pro | Gly | Ser |
| Cys 305 | Trp | Thr | Ser | Val | Ala 310 | | | | | | | | | | |
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| Arg | His | Ser | Arg 20 | Thr | Ala | Pro | Ala | Gly 25 | Pro | Ser | Arg | Gly | Ser 30 | Thr | Gly |
| Pro | Arg | Leu 35 | Trp | Pro | Cys | Ser | Ser 40 | Ala | Ser | Ser | Lys | Ala 45 | Arg | Arg | Ala |
| Ser | Trp 50 | Ser | Arg | Ser | Thr | Pro 55 | Ser | Arg | Pro | Ser | Ser 60 | Ser | Ser | Trp | His |
| Ser 65 | Ser | Leu | Ser | Lys | Ser 70 | Ser | Ser | Ser | Leu | Glu 75 | Met | Val | Ser | Thr | Ser 80 |
| Ala | Arg | Arg | Pro | Trp 85 | Lys | Ser | Ser | Val | Asn 90 | Ala | Pro | Ser | Ala | Gly 95 | Thr |
| Pro | Ser | Val | Arg 100 | Lys | Leu | Trp | Arg | His 105 | Leu | Ile | Met | Glu | Arg 110 | Pro | Glu |
| Gly | Ser | Cys 115 | Gly | Gln | Ala | Pro | Ser 120 | Leu | Val | Glu | Arg | Leu 125 | Trp | Pro | Val |
| Ala | Gly 130 | Gly | Trp | Lys | Val | Leu 135 | Cys | Phe | Leu | Ser | Gly 140 | Lys | Arg | Arg | Thr |
| Ser 145 | Lys | Ser | Glu | Ser | Ile 150 | Thr | Ser | Trp | Ala | Thr 155 | Arg | Asn | Ala | Arg | Val 160 |
| Leu | Pro | Glu | Gly | Met 165 | Val | Thr | Val | Phe | Phe 170 | Trp | Leu | Arg | Trp | Pro 175 | Trp |
| Pro | Ser | Pro | Cys 180 | Lys | His | Val | Ala | Pro 185 | Gly | Arg | Glu | Asn | Arg 190 | Pro | Glu |
| Pro | Ser | Arg | Leu | Trp | Val | Arg | Val | Thr | Ser | Thr | Ser | Phe | Cys | Val | Cys |

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|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|
| | | 195 | | | | | 200 | | | | | 205 | | | | |
| Ser | Thr | Ser | Val | Thr | Thr | Tyr | Thr | Leu | Ser | Pro | Arg | Cys | Ala | Ala | Ala | |
| | 210 | | | | | 215 | | | | | 220 | | | | | |
| Ala | Gly | Leu | Cys | Val | Leu | Ala | Ala | Ala | Gly | Ala | Ser | His | Gly | Ala | Glu | |
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| Ser | Ala | Arg | Cys | | | | | | | | | | | | | |

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| Gly | Gly | Gln | Thr | Leu | Cys | Pro | Ala | Gly | Glu | Leu | Pro | Gly | His | Ala | Arg | |
| | | | 20 | | | | | 25 | | | | | 30 | | | |
| Ala | Gln | Ala | Ser | Gly | Ala | Pro | Gly | Ser | Val | Leu | Ile | Ala | Val | Pro | Gly | |
| | | 35 | | | | | 40 | | | | | 45 | | | | |
| Arg | Arg | Arg | Val | His | Thr | Cys | Gly | Pro | Gly | Pro | Ala | Ala | Pro | Ser | Thr | |
| | 50 | | | | | 55 | | | | | 60 | | | | | |
| Arg | Gly | Glu | Cys | Pro | Pro | Pro | Ala | Leu | Gly | His | Thr | Arg | Pro | Ala | Arg | |
| 65 | | | | | 70 | | | | | 75 | | | | | 80 | |
| Pro | Arg | Pro | Val | Leu | Leu | Arg | Pro | Ser | Cys | Ser | Pro | Gly | Ala | Arg | Gly | |
| | | | | 85 | | | | | 90 | | | | | 95 | | |
| Ala | Gly | Thr | Trp | Ser | Ala | Leu | Leu | Pro | Arg | Gly | Thr | Leu | Leu | Gln | Glu | |
| | | | 100 | | | | | 105 | | | | | 110 | | | |
| Ala | Ala | His | Gln | Leu | Glu | Arg | Pro | Gln | Gln | Gly | Leu | Arg | Leu | Gln | Arg | |
| | | 115 | | | | | 120 | | | | | 125 | | | | |
| Leu | Arg | Gln | Gln | Leu | Val | Leu | Arg | Phe | Thr | Gln | His | Gly | Gln | Cys | Pro | |
| | 130 | | | | | 135 | | | | | 140 | | | | | |
| Gln | Gln | Val | Asp | Asn | Arg | Asp | Ser | Glu | Phe | Arg | His | Gln | His | Ser | Gly | |
| 145 | | | | | 150 | | | | | 155 | | | | | 160 | |
| Gly | Gln | His | Gln | Ala | Leu | Gln | Asp | Ser | Thr | Cys | Trp | Thr | Val | Gln | Gly | |
| | | | | 165 | | | | | 170 | | | | | 175 | | |
| Leu | His | Arg | Pro | Lys | Ala | Leu | Ala | Leu | Leu | Gln | Arg | Leu | Leu | Gln | Gly | |
| | | | 180 | | | | | 185 | | | | | 190 | | | |
| Ser | Gln | Gly | Gln | Leu | Val | Pro | Gln | His | Pro | Leu | Gln | Ala | Leu | Gln | Gln | |
| | | 195 | | | | | 200 | | | | | 205 | | | | |
| Gln | Leu | Ala | Gln | Leu | Ser | Val | Gln | Lys | Leu | Gln | Phe | Leu | Gly | Asp | Gly | |
| | 210 | | | | | 215 | | | | | 220 | | | | | |
| Leu | His | Leu | Cys | Pro | | | | | | | | | | | | |
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| Thr | Glu | Ile | Leu | Pro | Val | Phe | Val | Arg | Leu | Ala | Gly | Val | Pro | Ile | Cys |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Ser | Thr | Gly | Asn | Ala | Ser | Ala | Met | Leu | Gln | Pro | Gln | Lys | Pro | Gly | Leu |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Ser | Leu | Gln | Gln | Gln | Ala | Glu | Pro | Cys | Leu | Trp | Ser | Gly | Ala | Val | His |
| | | 35 | | | | | 40 | | | | | 45 | | | |
| Ser | Ser | Val | Cys | Leu | Val | Leu | Gly | Leu | Glu | Leu | Asp | Arg | Gly | Gly | Val |
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| Ser | Ser | Pro | Ser | Leu | Asn | Ser | Glu | Gln | Thr | Leu | Cys | Leu | Ala | Pro | Val |
| 65 | | | | | 70 | | | | | 75 | | | | | 80 |
| Cys | Pro | Gly | Asn | Ser | Pro | Gly | Pro | His | Trp | Glu | Pro | Leu | Val | Phe | |
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| Ser | Asn | Leu | Leu | Met | Ala | Gly | Ser | Pro | Leu | Cys | Pro | Leu | Ser | Leu | Ala |
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| Leu | Val | Ile | Ala | Glu | Leu | Cys | Ala | Gln | Cys | Cys | Gly | Leu | Ala | Val | Ala |
| | | 35 | | | | | 40 | | | | | 45 | | | |
| Arg | Leu | Phe | Leu | Trp | Gly | Ala | Arg | Ala | Gly | Cys | Gly | Asn | Gln | Ser | Ser |
| | 50 | | | | | 55 | | | | | 60 | | | | |
| Gln | Thr | Asp | Val | Ser | Gln | Ala | Glu | Asp | Ser | Phe | Leu | Ala | Glu | Val | Ser |
| 65 | | | | | 70 | | | | | 75 | | | | | 80 |
| Pro | His | Leu | Gln | Val | Ser | Gly | Trp | Gly | Gly | Ala | Arg | Arg | Gly | Arg | His |
| | | | | 85 | | | | | 90 | | | | | 95 | |
| Thr | Pro | Cys | Leu | Thr | | | | | | | | | | | |
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| Val | Arg | His | Thr | Ser | His | Leu | Ala | Val | Leu | Thr | Gln | Gly | Ala | Pro | Gly |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| His | Cys | Ser | Cys | Ala | Ala | Trp | Ala | Leu | Leu | Leu | Arg | Thr | Pro | Arg | Ala |

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|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Pro | Asn | Glu | Gly | Leu | Gly | Asn | Cys | Leu | Gly | Thr | Leu | Gly | Pro | Gly | Thr |
| | | 35 | | | | | 40 | | | | | 45 | | | |
| Gly | Ser | Val | Leu | Asn | Ser | Gly | Lys | Val | Lys | Arg | Pro | His | Leu | Tyr | Pro |
| | 50 | | | | | 55 | | | | | 60 | | | | |
| Ala | Gln | Ala | Gln | Glu | Gln | Gly | Arg | Gln | Ser | Cys | Gly | Gln | His | Pro | Thr |
| 65 | | | | | 70 | | | | | 75 | | | | 80 | |
| Thr | Asp | Thr | Val | Leu | Pro | Ala | Ala | Gly | Val | Arg | Gly | Leu | Val | Ser | Glu |
| | | | | 85 | | | | | 90 | | | | | 95 | |
| Ala | Ala | Ala | Trp | His | Trp | His | Cys | Leu | Cys | Tyr | Arg | Trp | Gly | Leu | Leu |
| | | | 100 | | | | | 105 | | | | | 110 | | |
| Arg | Val | Ser | Gln | Ile | Gln | Gly | Glu | Phe | Gln | Phe | Thr | Gln | Pro | Lys | Gly |
| | | 115 | | | | | 120 | | | | | 125 | | | |
| Pro | Val | Cys | Arg | Ala | Ala | Leu | Thr | Arg | Ala | Gln | Gln | His | Ser | Thr | Glu |
| | 130 | | | | | 135 | | | | | 140 | | | | |
| Leu | Gly | Lys | Gly | Arg | Gly | Glu | Arg | Val | Lys | Asp | | | | | |
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 <212> PRT
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| Arg | Met | Lys | Cys | Ser | Gln | Pro | Pro | Arg | Cys | His | Phe | Gln | Ser | Asp | Phe |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Gln | Lys | Cys | Ala | Pro | Cys | Pro | Arg | Ala | Gln | Thr | His | Trp | Leu | Glu | Pro |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Pro | Gly | Arg | Val | Gln | Thr | Ile | Ser | Ser | Met | Arg | Asn | Ala | Gln | Lys | Gly |
| | | 35 | | | | | 40 | | | | | 45 | | | |
| Phe | Ala | Asp | Ser | Ile | Arg | Leu | Trp | Arg | Leu | Pro | Ala | Ser | Gly | Val | Gly |
| | 50 | | | | | 55 | | | | | 60 | | | | |
| Trp | Val | Val | Ser | Pro | Pro | Ile | Gln | Thr | Gln | Glu | Val | Ala | Pro | Glu | Gly |
| 65 | | | | | 70 | | | | | 75 | | | | 80 | |
| Met | Tyr | Leu | Val | Gly | Ser | Ser | Ser | Gly | Thr | Leu | Gly | Gly | Cys | Arg | Ala |
| | | | | 85 | | | | | 90 | | | | | 95 | |
| Leu | Thr | Gln | Val | Phe | Leu | Ser | Leu | Ser | Ser | Leu | Gly | Cys | Val | Cys | Ala |
| | | | 100 | | | | | 105 | | | | | 110 | | |
| Cys | Ala | Cys | Ala | Cys | Leu | Cys | Phe | Ser | Leu | Trp | Ala | His | Gln | Asp | Ala |
| | | 115 | | | | | 120 | | | | | 125 | | | |
| Pro | Arg | Arg | Ala | Cys | Ala | Arg | Val | Pro | Thr | | | | | | |
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 <212> PRT

130

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<400> 203

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| Leu 1 | Ala | Ala | Ile | Lys 5 | Asp | Gln | Leu | Glu | Gly 10 | Val | Gln | Gln | Ala | Leu 15 | Ser |
| Gln | Ala | Ala | Pro 20 | Ile | Pro | Glu | Glu | Asp 25 | Thr | Asp | Thr | Glu | Glu 30 | Gly | Asp |
| Asp | Phe | Glu 35 | Leu | Leu | Asp | Gln | Ser 40 | Glu | Leu | Asp | Gln | Ile 45 | Glu | Ser | Glu |
| Leu | Gly 50 | Leu | Thr | Gln | Asp | Gln 55 | Glu | Ala | Glu | Ala | Gln 60 | Gln | Asn | Lys | Lys |
| Ser 65 | Ser | Gly | Phe | Leu | Ser 70 | Asn | Leu | Leu | Gly | Gly 75 | His | | | | |

<210> 204
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 <212> PRT
 <213> homo sapiens

<400> 204

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| Arg 1 | Val | Cys | Ser | Lys 5 | His | Phe | Leu | Arg | Leu 10 | Pro | Pro | Ser | Gln | Lys 15 | Arg |
| Thr | Gln | Thr | Leu 20 | Lys | Lys | Val | Met | Thr 25 | Leu | Asn | Tyr | Leu | Thr 30 | Ser | Gln |
| Ser | Trp | Ile 35 | Lys | Leu | Arg | Val | Asn 40 | Trp | Asp | Leu | His | Lys 45 | Thr | Arg | Lys |
| Gln | Lys 50 | His | Ser | Lys | Ile | Arg 55 | Ser | Leu | Gln | Val | Ser 60 | Phe | Gln | Ile | Cys |
| Trp 65 | Glu | Ala | Ile | Asn | Leu 70 | Gly | Ile | Ser | Leu | Gln 75 | Gln | Ser | Thr | Lys | Asn 80 |
| Thr | Lys | Lys | Ile | Ser 85 | Asn | Lys | Lys | Lys | Lys 90 | Lys | Lys | Arg | Lys | Arg 95 | Lys |
| Lys | Leu | Asn | Cys 100 | Lys | Leu | | | | | | | | | | |

<210> 205
 <211> 80
 <212> PRT
 <213> homo sapiens

<400> 205

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| Ile 1 | Cys | Leu | His | His 5 | Asn | His | Cys | Leu | Cys 10 | Asp | Thr | Gln | Leu | Leu 15 | Ala |
| Phe | Tyr | Gly | Leu | Ile | Pro | Pro | Thr | Ala | Arg | Leu | Glu | Met | Ala | Val | Asn |

| | | | | | | | | | | | | | | | | |
|-----------|-----------|-----------|-----|-----|-----------|-----------|-----------|-----|-----|-----------|-----------|-----------|-----|-----|-----------|--|
| | | | 20 | | | | | 25 | | | | | 30 | | | |
| Gly | Ala | Cys 35 | Phe | Phe | Thr | Asn | Lys 40 | Pro | Lys | Ser | Thr | Thr 45 | Ala | Glu | Ile | |
| Thr | Trp 50 | Lys | Arg | Phe | Ser | Leu 55 | Ser | Arg | Val | Leu | Lys 60 | Tyr | Thr | Phe | Lys | |
| Phe 65 | Phe | Pro | Lys | Lys | Leu 70 | Ile | Leu | Ile | Val | Phe 75 | Pro | Lys | Ser | Phe | Asn 80 | |

<210> 206
 <211> 76
 <212> PRT
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| <400> 206 | | | | | | | | | | | | | | | | |
| Gly 1 | Lys | Pro | Ala | Ala 5 | Leu | Glu | Ala | His | Gln 10 | Gly | Ser | Arg | Leu | Gln 15 | Gly | |
| Arg | Ser | Arg | Glu 20 | Gln | Ala | Ala | Ile | Pro 25 | Pro | Leu | Leu | Ser | Ser 30 | Arg | Thr | |
| Gln | Leu | Cys 35 | Gly | Leu | Gly | Phe | Leu 40 | Phe | Ala | Gly | Leu | Ala 45 | Pro | Cys | Arg | |
| Thr | Leu 50 | Val | Leu | Glu | Leu | Glu 55 | Gly | Pro | Ile | Leu | Pro 60 | Arg | Gly | Asp | Ser | |
| Gln 65 | Gly | Cys | Arg | Gly | Ile 70 | Gly | Trp | Arg | Arg | Val 75 | Leu | | | | | |

<210> 207
 <211> 72
 <212> PRT
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| <400> 207 | | | | | | | | | | | | | | | | |
| Asn 1 | Leu | Arg | Val | Ser 5 | Gln | Leu | Pro | Trp | Lys 10 | Pro | Thr | Arg | Ala | Pro 15 | Asp | |
| Cys | Arg | Glu | Glu 20 | Ala | Gly | Ser | Arg | Gln 25 | Pro | Tyr | Leu | His | Ser 30 | Cys | Pro | |
| Gln | Gly | Leu 35 | Ser | Cys | Val | Ala | Leu 40 | Asp | Phe | Phe | Leu | Arg 45 | Asp | Leu | Arg | |
| Pro | Ala 50 | Gly | His | Trp | Cys | Trp 55 | Ser | Trp | Arg | Val | Leu 60 | Ser | Cys | Pro | Gly | |
| Val 65 | Thr | Pro | Arg | Val | Ala 70 | Gly | Gly | | | | | | | | | |

<210> 208
 <211> 73
 <212> PRT
 <213> homo sapiens

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| <400> 208 | | | | | | | | | | | | | | | | |
| Pro | Gly | Met | Ser | Ser | Leu | Gln | Asp | Arg | His | Gly | Arg | Thr | Ile | Trp | Phe | |

| | | | | | | | | | | | | | | | | |
|-----------|-----------|-----------|-----------|-----|-----------|-----------|-----------|-----------|-----|-----|-----------|-----------|-----------|-----|-----|--|
| 1 | | | | 5 | | | | | 10 | | | | | 15 | | |
| Gln | Val | Gly | Pro 20 | Tyr | Cys | Ser | His | Arg 25 | Gln | Arg | Pro | Gln | Glu 30 | Ala | Asp | |
| Gly | Trp | Lys 35 | Arg | Gly | Val | Thr | Ile 40 | Thr | Gly | Val | Val | Met 45 | Leu | Arg | Val | |
| Cys | Leu 50 | Asp | Pro | Pro | Arg | Thr 55 | Thr | Leu | Phe | Leu | Arg 60 | Val | Thr | Pro | Leu | |
| Pro 65 | Ser | His | Ala | Ser | Gln 70 | Gly | Cys | Ser | | | | | | | | |

<210> 209
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 <212> PRT
 <213> homo sapiens

<400> 209

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| Gln 1 | Arg | Trp | Leu | Trp 5 | Thr | Ser | Ser | Thr | Ser 10 | Pro | Cys | Trp | Ile | Arg 15 | Ala | |
| Phe | Leu | Pro | Pro 20 | Ala | Gly | Gln | Val | Trp 25 | Pro | Cys | Ser | Leu | Gly 30 | Arg | Ala | |
| Pro | Ala | Pro 35 | Leu | Thr | Thr | Leu | Gln 40 | Leu | Thr | Met | Gln | Leu 45 | Met | Pro | Lys | |
| Leu | Trp 50 | Cys | Pro | Val | Cys | Ser 55 | Ser | Pro | Gly | Ser | His 60 | Cys | His | Leu | Gln | |
| Arg 65 | Gly | Ser | Leu | Leu | Arg 70 | Pro | Thr | Leu | Leu | His 75 | Leu | Ala | Pro | Pro | Trp 80 | |
| Leu | Leu | Ala | Trp | Pro 85 | Asn | Leu | Ala | Phe | Cys 90 | Ala | Met | Leu | Glu | Leu 95 | Glu | |
| Leu | Leu | Leu | Phe 100 | Phe | Arg | Gly | Gly | Asn 105 | Arg | Val | Glu | Ser | Gly 110 | Lys | Gly | |
| Leu | Ala | Pro 115 | Lys | Cys | Cys | Cys | Cys 120 | Gly | Phe | Phe | Ala | Phe 125 | Ser | Lys | Asp | |
| Ala | Leu 130 | Pro | Gly | Pro | Lys | Leu 135 | Gln | Thr | Ala | Val | Leu 140 | Ser | Lys | Gln | Val | |
| Arg 145 | Ser | Leu | Gly | Phe | Gly 150 | Ala | His | Leu | Leu | Ser 155 | Gly | Ser | Ile | Ser | Ile 160 | |
| Leu | Leu | Leu | Ala | Thr 165 | Ser | Gly | Gln | Arg | Pro 170 | Pro | Gln | Pro | His | Ile 175 | Ala | |
| Arg | Cys | Trp | Gln 180 | Lys | Gly | | | | | | | | | | | |

<210> 210
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 <212> PRT
 <213> homo sapiens

<400> 210

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| Val 1 | Gly | Pro | Gly | Lys 5 | Gln | Pro | Trp | Trp | Gly 10 | Gln | Val | Lys | Gln | Cys 15 | Gly |
| Ser | Gln | Gln | Gly 20 | Thr | Pro | Leu | Lys | Val 25 | Ala | Val | Ala | Pro | Arg 30 | Ala | Ala |
| Ala | His | Trp 35 | Thr | Pro | Gln | Leu | Trp 40 | His | Gln | Leu | His | Gly 45 | Glu | Leu | Gln |
| Ser | Gly 50 | Gln | Arg | Gly | Trp | Gly 55 | Pro | Ala | Lys | Arg | Ala 60 | Arg | Pro | Asp | Leu |
| Pro 65 | Ser | Gly | Arg | Gln | Glu 70 | Gly | Pro | Asp | Pro | Ala 75 | Arg | Arg | Ser | Arg | Gly 80 |
| Ser | Pro | Gln | Pro | Pro 85 | Leu | Leu | Leu | Ile | Ala 90 | Thr | Gly | Thr | Ser | Gly 95 | Asp |
| Arg | Leu | Cys | Ser 100 | Trp | Glu | Ser | Arg | Ser 105 | Pro | Gly | Phe | Val | Gly 110 | Leu | Pro |
| Ala | Gly | Asp 115 | Arg | His | Val | Ser | His 120 | Arg | Glu | Arg | Pro | Gly 125 | Ser | Arg | Pro |
| Gln | Leu 130 | | | | | | | | | | | | | | |

<210> 211
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 <213> homo sapiens

<400> 211

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| Val 1 | Thr | Gly | Lys | Gly 5 | Arg | Asp | Pro | Gly | Leu 10 | Ser | Cys | Ser | Ser | Ser 15 | Trp |
| Lys | Arg | Trp | Ser 20 | Arg | Thr | Val | Thr | Ile 25 | His | Ala | Asp | Thr | Glu 30 | Gln | Gln |
| Tyr | Glu | Thr 35 | Glu | Gln | Leu | Arg | Ala 40 | Val | Ser | Ser | Ser | Ala 45 | Glu | Ala | Ala |
| Trp | Ala 50 | Ala | Thr | Pro | Pro | Phe 55 | Cys | Asn | His | Pro | Met 60 | Met | Ser | Pro | Pro |
| His 65 | Leu | Thr | Ser | Arg | Trp 70 | Gly | Trp | Met | Ala | Glu 75 | Gln | Met | Lys | Pro | Ala 80 |
| Leu | Trp | Arg | Gly | Ser 85 | Leu | Thr | Glu | Met | His 90 | Thr | Phe | Met | Gly | Glu 95 | Val |
| Asp | Gly | His | Leu 100 | Thr | Ser | Leu | Met | Phe 105 | His | Thr | Val | Asp | Cys 110 | Thr | |

<210> 212
 <211> 243
 <212> PRT
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<400> 212

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| Asp 1 | Val | Gln | Val | Ala 5 | Gly | Pro | Glu | Pro | Asp 10 | Cys | Arg | Val | His | Ser 15 | His |
| Val | Leu | Pro | Gly 20 | Gln | Ala | His | Arg | Leu 25 | Ala | Pro | Gly | Pro | Tyr 30 | Ser | Val |
| Gly | Glu | Ser 35 | Leu | Gln | Pro | Arg | Glu 40 | Gly | Cys | Glu | Asp | Cys 45 | Asp | Arg | Gln |
| Lys | Ala 50 | Asn | Leu | Arg | Ile | Arg 55 | Phe | Lys | Pro | Ser | Leu 60 | Phe | Gln | His | Val |
| Gly 65 | Thr | His | Ser | Ser | Leu 70 | Ala | Gly | Lys | Ile | Gln 75 | Lys | Leu | Lys | Asp | Lys 80 |
| Asp | Phe | Gly | Lys | Gln 85 | Ala | Leu | Arg | Lys | Glu 90 | His | Val | Asn | Pro | Pro 95 | Ala |
| Glu | Val | Ser | Thr 100 | Ser | Leu | Lys | Thr | Tyr 105 | Gln | His | Phe | Thr | Leu 110 | Glu | Lys |
| Ala | Tyr | Leu 115 | Arg | Glu | Asp | Phe | Phe 120 | Trp | Ala | Phe | Thr | Pro 125 | Ala | Ala | Gly |
| Asp | Phe 130 | Ile | Arg | Phe | Arg | Phe 135 | Phe | Gln | Pro | Leu | Arg 140 | Leu | Glu | Arg | Phe |
| Phe 145 | Phe | Arg | Ser | Gly | Asn 150 | Ile | Glu | His | Pro | Glu 155 | Asp | Lys | Leu | Phe | Asn 160 |
| Thr | Ser | Val | Glu | Val 165 | Leu | Pro | Phe | Asp | Asn 170 | Pro | Gln | Ser | Asp | Lys 175 | Glu |
| Ala | Leu | Gln | Glu 180 | Gly | Arg | Thr | Ala | Thr 185 | Leu | Arg | Tyr | Pro | Arg 190 | Ser | Pro |
| Asp | Gly | Tyr 195 | Leu | Gln | Ile | Gly | Ser 200 | Phe | Tyr | Lys | Gly | Val 205 | Ala | Glu | Gly |
| Glu | Val 210 | Asp | Pro | Ala | Phe | Gly 215 | Pro | Leu | Glu | Ala | Leu 220 | Arg | Leu | Ser | Ile |
| Gln 225 | Thr | Asp | Ser | Pro | Val 230 | Trp | Val | Ile | Leu | Ser 235 | Glu | Ile | Phe | Leu | Lys 240 |
| Lys | Ala | Asp | | | | | | | | | | | | | |

<210> 213

<211> 244

<212> PRT

<213> homo sapiens

<400> 213

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| Gly 1 | Arg | Thr | Gly | Val 5 | Ser | Val | Val | Met | Gly 10 | Ile | Pro | Ser | Val | Arg 15 | Arg |
| Glu | Val | His | Ser 20 | Tyr | Leu | Thr | Asp | Thr 25 | Leu | His | Ser | Leu | Ile 30 | Ser | Glu |
| Leu | Ser | Pro 35 | Gln | Glu | Lys | Glu | Asp 40 | Ser | Val | Ile | Val | Val 45 | Leu | Ile | Ala |

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Thr | Asp | Ser | Gln | Tyr | Thr | Ser | Ala | Val | Thr | Glu | Asn | Ile | Lys | Ala |
| | 50 | | | | | 55 | | | | | 60 | | | | |
| Leu | Phe | Pro | Thr | Glu | Ile | His | Ser | Gly | Leu | Leu | Glu | Val | Ile | Ser | Pro |
| 65 | | | | | 70 | | | | | 75 | | | | | 80 |
| Ser | Pro | His | Phe | Tyr | Pro | Asp | Phe | Ser | Arg | Leu | Arg | Glu | Ser | Phe | Gly |
| | | | | 85 | | | | | 90 | | | | | 95 | |
| Asp | Pro | Lys | Glu | Arg | Val | Arg | Trp | Arg | Thr | Lys | Gln | Asn | Leu | Asp | Tyr |
| | | | 100 | | | | | 105 | | | | | 110 | | |
| Cys | Phe | Leu | Met | Met | Tyr | Ala | Gln | Ser | Lys | Gly | Ile | Tyr | Tyr | Val | Gln |
| | | 115 | | | | | 120 | | | | | 125 | | | |
| Leu | Glu | Asp | Asp | Ile | Val | Ala | Lys | Pro | Asn | Tyr | Leu | Ser | Thr | Met | Lys |
| | 130 | | | | | 135 | | | | | 140 | | | | |
| Asn | Phe | Ala | Leu | Gln | Gln | Pro | Ser | Glu | Asp | Trp | Met | Ile | Leu | Glu | Phe |
| 145 | | | | | 150 | | | | | 155 | | | | | 160 |
| Ser | Gln | Leu | Gly | Phe | Ile | Gly | Lys | Met | Phe | Lys | Ser | Leu | Asp | Leu | Ser |
| | | | | 165 | | | | | 170 | | | | | 175 | |
| Leu | Ile | Val | Glu | Phe | Ile | Leu | Met | Phe | Tyr | Arg | Asp | Lys | Pro | Ile | Asp |
| | | | 180 | | | | | 185 | | | | | 190 | | |
| Trp | Leu | Leu | Asp | His | Ile | Leu | Trp | Val | Lys | Val | Cys | Asn | Pro | Glu | Lys |
| | | 195 | | | | | 200 | | | | | 205 | | | |
| Asp | Ala | Lys | Thr | Val | Thr | Gly | Arg | Lys | Pro | Thr | Cys | Gly | Ser | Ala | Ser |
| | 210 | | | | | 215 | | | | | 220 | | | | |
| Asn | Arg | Pro | Ser | Ser | Ser | Thr | Trp | Ala | Leu | Thr | Pro | Arg | Trp | Leu | Ala |
| 225 | | | | | 230 | | | | | 235 | | | | | 240 |
| Arg | Ser | Arg | Asn | | | | | | | | | | | | |

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<400> 214

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| Pro | Ala | Glu | Ser | Gln | Pro | Ala | Asp | Pro | Leu | Gln | Thr | Val | Pro | Leu | Pro |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Ala | Arg | Gly | His | Ser | Leu | Leu | Ala | Gly | Trp | Gln | Asp | Pro | Glu | Thr | Glu |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Gly | Gln | Arg | Leu | Trp | Lys | Ala | Gly | Ala | Ala | Glu | Gly | Ala | Cys | Glu | Pro |
| | | 35 | | | | | 40 | | | | | 45 | | | |
| Ala | Ser | Arg | Gly | Glu | His | Glu | Pro | Glu | Asp | Ile | Pro | Ala | Leu | His | Pro |
| | 50 | | | | | 55 | | | | | 60 | | | | |
| Gly | Glu | Ser | Leu | Pro | Ala | Arg | Gly | Leu | Leu | Leu | Gly | Leu | His | Pro | Cys |
| 65 | | | | | 70 | | | | | 75 | | | | | 80 |
| Arg | Gly | Gly | Leu | His | Pro | Leu | Pro | Leu | Leu | Pro | Thr | Ser | Lys | Thr | Gly |
| | | | | 85 | | | | | 90 | | | | | 95 | |

| | | | | | | | | | | | | | | | |
|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Ala | Val | Leu | Leu 100 | Pro | Gln | Trp | Glu | His 105 | Arg | Ala | Pro | Gly | Gly 110 | Gln | Ala |
| Leu | Gln | His 115 | Val | Cys | Gly | Gly | Ala 120 | Ala | Leu | Arg | Gln | Pro 125 | Ser | Val | Arg |
| Gln | Gly 130 | Gly | Pro | Ala | Gly | Gly 135 | Pro | His | Arg | His | Pro 140 | Pro | Val | Pro | Ser |
| Glu 145 | Pro | Arg | Arg | Leu | Pro 150 | Pro | Asp | Arg | Leu | Leu 155 | Leu | Gln | Gly | Ser | Gly 160 |
| Arg | Gly | Arg | Gly | Gly 165 | Pro | Ser | Leu | Arg | Pro 170 | Ser | Gly | Ser | Thr | Ala 175 | Pro |
| Leu | Asp | Pro | Asp 180 | Gly | Leu | Pro | Cys | Val 185 | Gly | Asp | Ser | Glu | Arg 190 | Asp | Leu |
| Pro | Glu | Lys 195 | Gly | Arg | Leu | Ser | Cys 200 | Gly | Leu | Leu | Arg | Val 205 | Pro | Cys | Gly |
| Gln | Pro 210 | | | | | | | | | | | | | | |

<210> 215
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 <213> homo sapiens

<400> 215

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| Gly 1 | Gly | Ala | Gly | Leu 5 | Val | His | Gly | Ser | Ala 10 | Asp | Trp | Pro | Cys | Leu 15 | Ala |
| Pro | Trp | Arg | Val 20 | Ser | Ser | Cys | Phe | Leu 25 | Pro | Gly | Thr | Glu | Leu 30 | Arg | Gly |
| Leu | Gly | Ala 35 | Pro | Gly | Ala | Lys | Ser 40 | Arg | Leu | Trp | Cys | Arg 45 | Gly | Gly | Gly |
| Leu | Ser 50 | Leu | Asn | Arg | His | Pro 55 | Glu | Val | Leu | Leu | Arg 60 | Cys | Trp | Val | His |
| Pro 65 | Glu | Trp | His | Gly | Glu 70 | Gln | Leu | Trp | Pro | Val 75 | Leu | Leu | Pro | Arg | Pro 80 |
| Val | Leu | Gly | Lys | Leu 85 | Ser | Ser | Gly | Pro | Ser 90 | Leu | Gln | Arg | Pro | Arg 95 | Met |
| Gly | Trp | Val | Trp 100 | Gly | Thr | His | Gly | Glu 105 | Trp | Pro | Glu | Glu | Leu 110 | Arg | Val |
| Lys | Arg | Ala 115 | Pro | Val | Cys | Trp | Leu 120 | Gln | Arg | Pro | Gly | Ala 125 | Pro | Leu | Ser |

<210> 216
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 <212> PRT
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<400> 216

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| Phe | Pro | Gln | Asp | Trp | Pro | Arg | Lys | Glu | His | Arg | Pro | Gln | Leu | Leu | Pro |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|

| 1 | | | | 5 | | | | 10 | | | | 15 | | | |
|-----------|-----------|------------|------------|-----------|-----------|-----------|------------|------------|-----------|-----------|-----------|-----------|------------|-----------|-----------|
| Val | Pro | Leu | Arg 20 | Val | Asp | Pro | Ala | Ser 25 | Gln | Glu | His | Leu | Arg 30 | Val | Ser |
| Val | Lys | Arg 35 | Gln | Ala | Ser | Thr | Pro 40 | Ala | Pro | Glu | Pro | Ala 45 | Leu | Ser | Ser |
| Arg | Cys 50 | Pro | Gln | Thr | Pro | Gln 55 | Leu | Cys | Ala | Arg | Gln 60 | Glu | Ala | Ala | Arg |
| His 65 | Thr | Pro | Gly | Arg | Gln 70 | Ala | Arg | Pro | Val | Arg 75 | Gly | Pro | Met | Asp | Lys 80 |
| Pro | Ser | Pro | Ala | Ser 85 | Gly | Lys | Thr | Gly | Pro 90 | Phe | Pro | Thr | Gly | His 95 | Ala |
| Pro | Glu | Leu | Trp 100 | Gln | Ile | Ala | Gly | Ala 105 | Ile | Val | Trp | Gly | Glu 110 | Phe | Asn |
| Lys | Ser | Pro 115 | Phe | Glu | Asn | Glu | Lys 120 | Lys | Lys | Lys | Lys | | | | |

<210> 217
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 <212> PRT
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| Val 1 | Pro | His | Thr | His 5 | Pro | Ile | Leu | Gly | Leu 10 | Cys | Lys | Glu | Gly | Pro 15 | Glu |
| Leu | Ser | Phe | Pro 20 | Arg | Thr | Gly | Leu | Gly 25 | Arg | Ser | Thr | Gly | His 30 | Ser | Cys |
| Ser | Pro | Cys 35 | His | Ser | Gly | Trp | Thr 40 | Gln | His | Leu | Arg | Ser 45 | Thr | Ser | Gly |
| Cys | Arg 50 | Leu | Arg | Asp | Arg | Pro 55 | Pro | Pro | Leu | His | Gln 60 | Ser | Leu | Leu | Leu |
| Ala 65 | Pro | Gly | Ala | Pro | Arg 70 | Pro | Arg | Ser | Ser | Val 75 | Pro | Gly | Lys | Lys | Gln 80 |
| Leu | Asp | Thr | Arg | Gln 85 | Gly | Ala | Lys | His | Gly 90 | Gln | Ser | Ala | Asp | Pro 95 | Trp |
| Thr | Ser | Pro | Ala 100 | Pro | Pro | Gln | Gly | Lys 105 | Gln | Gly | Leu | Ser | Leu 110 | Gln | Asp |
| Thr | Pro | Gln 115 | Ser | Cys | Gly | Arg | Leu 120 | Gln | Glu | Pro | Ser | Cys 125 | Gly | Glu | Asn |
| Leu | Ile 130 | Lys | Ala | Leu | Leu | Lys 135 | Met | Lys | Lys | Lys | Lys 140 | Lys | Lys | | |

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| Arg 1 | Arg | Gly | Leu | Glu 5 | Gly | Phe | Asn | Gly | Gly 10 | Trp | Thr | Glu | Met | Pro 15 | Gly |
| Ile | Leu | Trp | Met 20 | Glu | Pro | Thr | Gln | Pro 25 | Pro | Asp | Phe | Ala | Leu 30 | Ala | Tyr |
| Arg | Pro | Ser 35 | Phe | Pro | Glu | Asp | Arg 40 | Glu | Pro | Gln | Ile | Pro 45 | Tyr | Pro | Glu |
| Pro | Thr 50 | Trp | Pro | Pro | Pro | Leu 55 | Ser | Ala | Pro | Arg | Val 60 | Pro | Tyr | His | Ser |
| Ser 65 | Val | Leu | Ser | Val | Thr 70 | Arg | Pro | Val | Val | Val 75 | Ser | Ala | Thr | His | Pro 80 |
| Thr | Leu | Pro | Ser | Ala 85 | His | Gln | Pro | Pro | Val 90 | Ile | Pro | Ala | Thr | His 95 | Pro |
| Ala | Leu | Ser | Arg 100 | Asp | His | Gln | Ile | Pro 105 | Val | Ile | Ala | Ala | Asn 110 | Tyr | Pro |
| Asp | Leu | Pro 115 | Ser | Ala | Tyr | Gln | Pro 120 | Gly | Ile | Leu | Ser | Val 125 | Ser | His | Ser |
| Ala | Gln 130 | Pro | Pro | Ala | His | Gln 135 | Pro | Pro | Met | Ile | Ser 140 | Thr | Lys | Tyr | Pro |
| Glu 145 | Leu | Phe | Pro | Ala | His 150 | Gln | Ser | Pro | Met | Phe 155 | Pro | Asp | Thr | Arg | Val 160 |
| Ala | Gly | Thr | Gln | Thr 165 | Thr | Thr | His | Leu | Pro 170 | Gly | Ile | Pro | Pro | Asn 175 | His |
| Ala | Pro | Leu | Val 180 | Thr | Thr | Leu | Gly | Ala 185 | Gln | Arg | Pro | Pro | Gln 190 | Ala | Pro |
| Asp | Ala | Leu 195 | Val | Leu | Arg | Thr | Gln 200 | Ala | Thr | Gln | Leu | Pro 205 | Ile | Ile | Pro |
| Thr | Ala 210 | Gln | Pro | Ser | Leu | Thr 215 | Thr | Thr | Ser | Arg | Ser 220 | Pro | Val | Ser | Pro |
| Ala 225 | His | Gln | Ile | Ser | Val 230 | Pro | Ala | Ala | Thr | Gln 235 | Pro | Ala | Ala | Leu | Pro 240 |
| Thr | Leu | Leu | Pro | Ser 245 | Gln | Ser | Pro | Thr | Asn 250 | Gln | Thr | Ser | Pro | Ile 255 | Ser |
| Pro | Thr | His | Pro 260 | His | Ser | Lys | Ala | Pro 265 | Gln | Ile | Pro | Arg | Glu 270 | Asp | Gly |
| Pro | Ser | Pro 275 | Lys | Leu | Ala | Leu | Trp 280 | Leu | Pro | Ser | Pro | Ala 285 | Pro | Thr | Ala |
| Ala 290 | Pro | Thr | Ala | Leu | Gly | Glu 295 | Ala | Gly | Leu | Ala | Glu 300 | His | Ser | Gln | Arg |
| Asp 305 | Asp | Arg | Trp | Leu | Leu 310 | Val | Ala | Leu | Leu | Val 315 | Pro | Thr | Cys | Val | Phe 320 |
| Leu | Val | Val | Leu | Leu 325 | Ala | Leu | Gly | Ile | Val 330 | Tyr | Cys | Thr | Arg | Cys 335 | Gly |

| | | | | | | | | | | | | | | | |
|-----|------------|------------|------------|-----|-----|------------|------------|------------|-----|-----|-----|------------|------------|-----|-----|
| Pro | His | Ala | Pro 340 | Asn | Lys | Arg | Ile | Thr 345 | Asp | Cys | Tyr | Arg | Trp 350 | Val | Ile |
| His | Ala | Gly 355 | Ser | Lys | Ser | Pro | Thr 360 | Glu | Pro | Met | Pro | Pro 365 | Arg | Gly | Ser |
| Leu | Thr 370 | Gly | Val | Gln | Thr | Cys 375 | Arg | Thr | Ser | Val | | | | | |

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<212> PRT

<213> homo sapiens

<400> 219

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| Val 1 | Asp | Thr | Asp | Glu 5 | Cys | Gln | Ile | Ala | Gly 10 | Val | Cys | Gln | Gln | Met 15 | Cys |
| Val | Asn | Tyr | Val 20 | Gly | Gly | Phe | Glu | Cys 25 | Tyr | Cys | Ser | Glu | Gly 30 | His | Glu |
| Leu | Glu | Ala 35 | Asp | Gly | Ile | Ser | Cys 40 | Ser | Pro | Ala | Gly | Ala 45 | Met | Gly | Ala |
| Gln | Gly 50 | Ser | Gln | Asp | Leu | Gly 55 | Asp | Glu | Leu | Leu | Asp 60 | Asp | Gly | Glu | Asp |
| Glu 65 | Glu | Asp | Glu | Asp | Glu 70 | Ala | Trp | Lys | Ala | Ser 75 | Thr | Val | Ala | Gly | Arg 80 |
| Arg | Cys | Leu | Gly | Ser 85 | Cys | Gly | Trp | Ser | Leu 90 | Arg | Ser | Arg | Leu | Thr 95 | Leu |
| Pro | Trp | Pro | Ile 100 | Asp | Arg | Ala | Ser | Gln 105 | Arg | Thr | Glu | Ser | His 110 | Arg | Tyr |
| Pro | Thr | Arg 115 | Ser | Pro | Pro | Gly | His 120 | Pro | Arg | Ser | Val | Pro 125 | Pro | Gly | Ser |
| Pro | Thr 130 | Thr | Pro | Gln | Cys | Ser 135 | Pro | Ser | Pro | Gly | Leu 140 | Trp | Trp | Ser | Leu |
| Pro 145 | Arg | Ile | Pro | His | Cys 150 | Leu | Leu | Pro | Thr | Ser 155 | Leu | Leu | | | |

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<211> 211

<212> PRT

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|----------|-----|-----------|-----------|----------|-----|-----|-----------|-----------|-----------|-----|-----|-----------|-----------|-----------|-----|
| Pro 1 | Pro | Pro | Pro | Gly 5 | Pro | Leu | Cys | Leu | Leu 10 | Pro | Ile | Lys | Ser | Leu 15 | Cys |
| Leu | Leu | Pro | Pro 20 | Ser | Pro | Gln | Pro | Ser 25 | Pro | Pro | Ser | Cys | Pro 30 | Leu | Arg |
| Ala | Pro | Leu 35 | Thr | Arg | Pro | His | Pro 40 | Ser | Ala | Leu | His | Ile 45 | Pro | Ile | Pro |

[illegible]

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[illegible]

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<400> 222

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| Asn 1 | Lys | Glu | Leu | Ser 5 | Ser | Leu | Lys | Ser | Ser 10 | Asp | Val | Val | Met | Thr 15 | His |
| Thr | Glu | Ser | Cys 20 | Ile | Thr | Val | Ala | Ser 25 | Arg | Ala | Thr | His | Leu 30 | Phe | Gly |
| Leu | Ser | Asp 35 | Gly | His | Ser | Phe | Thr 40 | Thr | Gln | Gln | Gln | Thr 45 | Pro | His | Thr |
| Gly | Thr 50 | Arg | Met | Ser | Ala | Ser 55 | Thr | Trp | Glu | Ala | Val 60 | Ala | Glu | Pro | Gly |
| Arg 65 | Trp | Pro | Gly | Pro | Asp 70 | His | Gly | Leu | Ser | Gly 75 | Ala | Gly | His | Gln | Gly 80 |
| Val | Arg | Val | Pro | Met 85 | Leu | Pro | Gln | Gly | Val 90 | Gly | Met | Thr | Gly | Arg 95 | Ser |
| Leu | Val | Thr | Arg 100 | Gln | Trp | Thr | Ser | Leu 105 | Gly | Glu | Gly | Trp | Arg 110 | Glu | Arg |
| Ala | Gly | Gln 115 | Ala | Pro | Ala | Ala | His 120 | Arg | Leu | Ala | His | Ala 125 | Asn | Thr | Leu |
| Lys | Ala 130 | Leu | Leu | Gly | Gly | Phe 135 | Ser | Glu | Asn | Gln | Gly 140 | Glu | Ala | Leu | Val |
| Ser 145 | Phe | Pro | Arg | Lys | Val 150 | Pro | Ile | Leu | Pro | Pro 155 | Ala | Pro | Leu | Ser | Pro 160 |
| Glu | Pro | Arg | Asp | Pro 165 | Gln | Gly | Val | Leu | Ala 170 | Gly | Gly | Ala | Lys | Gln 175 | Arg |
| Cys | Leu | Arg | Pro 180 | Pro | Glu | Pro | Ser | Leu 185 | Pro | Met | Ile | Pro | Arg 190 | His | Ala |
| Arg | Gln | Gly 195 | Val | Gly | Leu | | | | | | | | | | |

<210> 223
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 <212> PRT
 <213> homo sapiens

<400> 223

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| Ser 1 | His | Gly | Met | Pro 5 | Gly | Arg | Gly | Trp | Ala 10 | Cys | Glu | Val | Asp | Trp 15 | His |
| Ser | Cys | Pro | His 20 | Thr | Leu | Pro | Gly | Trp 25 | Ala | Pro | Glu | Ile | Trp 30 | Gly | Ser |
| Pro | Ser | Gln 35 | His | Gly | Val | Leu | Gly 40 | Ala | Cys | Pro | Gly | Pro 45 | Phe | Thr | Arg |

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Thr | Glu | Ala | Pro | His | Pro | Leu | Ser | His | Phe | Ser | Arg | Trp | Lys | Thr | Gln |
| | 50 | | | | | 55 | | | | | 60 | | | | |
| Arg | Arg | Lys | Arg | Pro | Trp | Gly | Gly | Val | Pro | Ser | Cys | Leu | Gln | Leu | Ala |
| 65 | | | | | 70 | | | | | 75 | | | | | 80 |
| Pro | Trp | Val | Pro | Leu | Cys | Gly | Gly | Ser | Pro | Asp | Ser | Ile | Ser | Ser | Ala |
| | | | | 85 | | | | | 90 | | | | | 95 | |

Ser Glu

<210> 224
 <211> 298
 <212> PRT
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<400> 224

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| Ala | Thr | Arg | Arg | Arg | Ala | Ala | Glu | Ala | Gly | Met | Ala | Ala | Val | Leu | Gln |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Arg | Val | Glu | Arg | Leu | Ser | Asn | Arg | Val | Val | Arg | Val | Leu | Gly | Cys | Asn |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Pro | Gly | Pro | Met | Thr | Leu | Gln | Gly | Thr | Asn | Thr | Tyr | Leu | Val | Gly | Thr |
| | | 35 | | | | | 40 | | | | | 45 | | | |
| Gly | Pro | Arg | Arg | Ile | Leu | Ile | Asp | Thr | Gly | Glu | Pro | Ala | Ile | Pro | Glu |
| | 50 | | | | | 55 | | | | | 60 | | | | |
| Tyr | Ile | Ser | Cys | Leu | Lys | Gln | Ala | Leu | Thr | Glu | Phe | Asn | Thr | Ala | Ile |
| 65 | | | | | 70 | | | | | 75 | | | | | 80 |
| Gln | Glu | Ile | Val | Val | Thr | His | Trp | His | Arg | Asp | His | Ser | Gly | Gly | Ile |
| | | | | 85 | | | | | 90 | | | | | 95 | |
| Gly | Asp | Ile | Cys | Lys | Ser | Ile | Asn | Asn | Asp | Thr | Thr | Tyr | Cys | Ile | Lys |
| | | | 100 | | | | | 105 | | | | | 110 | | |
| Lys | Leu | Pro | Arg | Asn | Pro | Gln | Arg | Glu | Glu | Ile | Ile | Gly | Asn | Gly | Glu |
| | | 115 | | | | | 120 | | | | | 125 | | | |
| Gln | Gln | Tyr | Val | Tyr | Leu | Lys | Asp | Gly | Asp | Val | Ile | Lys | Thr | Glu | Gly |
| | 130 | | | | | 135 | | | | | 140 | | | | |
| Ala | Thr | Leu | Arg | Val | Leu | Tyr | Thr | Pro | Gly | His | Thr | Asp | Asp | His | Met |
| 145 | | | | | 150 | | | | | 155 | | | | | 160 |
| Ala | Leu | Leu | Leu | Glu | Glu | Glu | Asn | Ala | Ile | Phe | Ser | Gly | Asp | Cys | Ile |
| | | | | 165 | | | | | 170 | | | | | 175 | |
| Leu | Gly | Glu | Gly | Thr | Thr | Val | Phe | Glu | Asp | Leu | Tyr | Asp | Tyr | Met | Asn |
| | | | 180 | | | | | 185 | | | | | 190 | | |
| Ser | Leu | Lys | Glu | Leu | Leu | Lys | Ile | Lys | Ala | Asp | Ile | Ile | Tyr | Pro | Gly |
| | | 195 | | | | | 200 | | | | | 205 | | | |
| His | Gly | Pro | Val | Ile | His | Asn | Ala | Glu | Ala | Lys | Ile | Gln | Gln | Tyr | Ile |
| | 210 | | | | | 215 | | | | | 220 | | | | |
| Ser | His | Arg | Asn | Ile | Arg | Glu | Gln | Gln | Ile | Leu | Thr | Leu | Phe | Arg | Glu |
| 225 | | | | | 230 | | | | | 235 | | | | | 240 |

| | | | | | | | | | | | | | | | |
|-----|------------|------------|------------|------------|-----|------------|------------|------------|------------|-----|-----|------------|------------|------------|-----|
| Asn | Phe | Glu | Lys | Ser 245 | Phe | Thr | Val | Met | Glu 250 | Leu | Val | Lys | Ile | Ile 255 | Tyr |
| Lys | Asn | Thr | Pro 260 | Glu | Asn | Leu | His | Glu 265 | Met | Ala | Lys | His | Asn 270 | Leu | Leu |
| Leu | His | Leu 275 | Lys | Lys | Leu | Glu | Lys 280 | Glu | Gly | Lys | Ile | Phe 285 | Ser | Asn | Thr |
| Asp | Pro 290 | Asp | Lys | Lys | Trp | Lys 295 | Ala | His | Leu | | | | | | |

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<400> 225

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| Gly 1 | Phe | Ser | Trp | Gly 5 | Arg | Ser | Pro | Leu | Gly 10 | Arg | Cys | Trp | Cys | Leu 15 | Gly |
| Gly | Ser | Trp | Asp 20 | Pro | Gly | Tyr | Ser | Pro 25 | Thr | His | Ala | Arg | Leu 30 | Asp | Trp |
| Thr | Ala | Ala 35 | Arg | Arg | Ala | Ala | Val 40 | Gln | Gln | Pro | Phe | Pro 45 | Pro | Gln | Pro |
| Pro | Ala 50 | Gly | Val | Ser | Pro | Ile 55 | Trp | Ile | Leu | | | | | | |

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<400> 226

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| Ser 1 | Gly | Ser | Leu | Ser 5 | Leu | Asn | His | Ile | Ser 10 | Ile | Phe | Gln | Ile | Asn 15 | Ile |
| Leu | Leu | Leu | Ser 20 | Ile | Ser | Tyr | Asn | Phe 25 | Phe | Ser | Leu | Arg | Ile 30 | Pro | Trp |
| Glu | Phe | Phe 35 | Asn | Ala | Ile | Gly | Ser 40 | Val | Ile | Ile | Asp | Ala 45 | Phe | Thr | Asn |
| Ile | Ser 50 | Tyr | Ala | Ser | Arg | Met 55 | Ile | Ser | Val | Pro | Val 60 | Ser | His | Tyr | Asn |
| Phe 65 | Leu | Asp | Cys | Cys | Val 70 | Lys | Phe | Ser | | | | | | | |

<210> 227
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 <213> homo sapiens

<400> 227

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| Ala 1 | Phe | Leu | Leu | Arg 5 | Pro | Ser | Val | Thr | Ala 10 | Ser | Thr | Arg | Leu | Leu 15 | Pro |
|----------|-----|-----|-----|----------|-----|-----|-----|-----|-----------|-----|-----|-----|-----|-----------|-----|

| | | | | | | | | | | | | | | | | |
|-----------|------------|------------|------------|-----------|-----------|------------|------------|------------|-----------|-----------|------------|------------|------------|-----------|-----------|--|
| Val | Cys | Ala | Ser 20 | Pro | Arg | Ser | Ser | Pro 25 | Gly | Pro | Ser | Pro | Ala 30 | Gln | Gln | |
| Gln | Gln | Ala 35 | Trp | Gln | Gln | Ala | Trp 40 | Ser | Ser | Ala | Arg | Ala 45 | Pro | Ser | Arg | |
| Cys | Arg 50 | Ala | Arg | Pro | Ser | Ser 55 | Ser | Glu | Arg | Pro | Cys 60 | Pro | Ala | Val | Gly | |
| Arg 65 | Leu | Ala | Ser | Leu | Tyr 70 | Cys | Cys | Cys | Met | Val 75 | Phe | Ala | Ser | Pro | Pro 80 | |
| Arg | Pro | Gly | Arg | Thr 85 | Trp | Val | His | Cys | Thr 90 | Gly | Trp | Pro | Arg | Leu 95 | Ala | |
| Thr | Gly | Leu | Trp 100 | Pro | Leu | Thr | Cys | Gln 105 | Val | Trp | Gly | Thr | Pro 110 | Arg | Lys | |
| Gln | Gln | Pro 115 | Leu | Pro | Leu | Leu | Gly 120 | Ser | Trp | Pro | Leu | Ala 125 | Ala | Ser | Trp | |
| Arg | Leu 130 | Trp | Trp | Met | Pro | Trp 135 | Ser | Trp | Ala | Pro | Arg 140 | Leu | | | | |

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| Val 1 | Pro | Pro | Pro | Ala 5 | Leu | Gly | His | Arg | Gln 10 | His | Ala | Pro | Ala | Ser 15 | Arg | |
| Leu | Arg | Glu | Ser 20 | Thr | Gln | Leu | Pro | Arg 25 | Pro | Phe | Thr | Ser | Thr 30 | Ala | Ala | |
| Ala | Gly | Met 35 | Ala | Ala | Ser | Val | Glu 40 | Gln | Arg | Glu | Gly | Thr 45 | Ile | Gln | Val | |
| Gln | Gly 50 | Gln | Ala | Leu | Phe | Phe 55 | Arg | Glu | Ala | Leu | Pro 60 | Gly | Ser | Gly | Gln | |
| Ala 65 | Arg | Phe | Ser | Val | Leu 70 | Leu | Leu | His | Gly | Ile 75 | Arg | Phe | Ser | Ser | Glu 80 | |
| Thr | Trp | Gln | Asn | Leu 85 | Gly | Thr | Leu | His | Arg 90 | Leu | Ala | Gln | Ala | Gly 95 | Tyr | |
| Arg | Ala | Val | Ala 100 | Ile | Asp | Leu | Pro | Gly 105 | Leu | Gly | His | Ser | Lys 110 | Glu | Ala | |
| Ala | Ala | Pro 115 | Ala | Pro | Ile | Gly | Glu 120 | Leu | Ala | Pro | Gly | Ser 125 | Phe | Leu | Ala | |
| Ala | Val 130 | Val | Asp | Ala | Leu | Glu 135 | Leu | Gly | Pro | Pro | Val 140 | Val | Ile | Ser | Pro | |
| Ser 145 | Leu | Ser | Gly | Met | Tyr 150 | Ser | Leu | Pro | Phe | Leu 155 | Thr | Ala | Pro | Gly | Ser 160 | |
| Gln | Leu | Pro | Gly | Phe 165 | Val | Pro | Val | Ala | Pro 170 | Ile | Cys | Thr | Asp | Lys 175 | Ile | |

| | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|
| Asn | Ala | Ala | Asn | Tyr | Ala | Ser | Val | Lys | Thr | Pro | Ala | Leu | Ile | Val | Tyr | |
| | | | 180 | | | | | 185 | | | | | 190 | | | |
| Gly | Asp | Gln | Asp | Pro | Met | Gly | Gln | Thr | Ser | Phe | Glu | His | Leu | Lys | Gln | |
| | | 195 | | | | | 200 | | | | | 205 | | | | |
| Leu | Pro | Asn | His | Arg | Val | Leu | Ile | Met | Lys | Gly | Ala | Gly | His | Pro | Cys | |
| | 210 | | | | | 215 | | | | | 220 | | | | | |
| Tyr | Leu | Asp | Lys | Pro | Glu | Glu | Trp | His | Thr | Gly | Leu | Leu | Asp | Phe | Leu | |
| 225 | | | | | 230 | | | | | 235 | | | | | 240 | |
| Gln | Gly | Leu | Gln | | | | | | | | | | | | | |

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| Trp | Thr | Asp | His | Asn | Arg | Gly | Ala | Gln | Leu | Gln | Gly | Ile | His | His | Ser | |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | | |
| Arg | Gln | Glu | Ala | Ala | Arg | Gly | Gln | Leu | Pro | Asn | Arg | Gly | Arg | Gly | Cys | |
| | | | 20 | | | | | 25 | | | | | 30 | | | |
| Cys | Phe | Leu | Gly | Val | Pro | Gln | Thr | Trp | Gln | Val | Asn | Gly | His | Ser | Pro | |
| | | 35 | | | | | 40 | | | | | 45 | | | | |
| Val | Ala | Ser | Leu | Gly | Gln | Pro | Val | Gln | Cys | Thr | Gln | Val | Leu | Pro | Gly | |
| | 50 | | | | | 55 | | | | | 60 | | | | | |
| Leu | Gly | Gly | Glu | Ala | Asn | Thr | Met | Gln | Gln | Gln | Tyr | Arg | Glu | Ala | Ser | |
| 65 | | | | | 70 | | | | | 75 | | | | | 80 | |
| Leu | Pro | Thr | Ala | Gly | Gln | Gly | Leu | Ser | Glu | Glu | Glu | Gly | Leu | Ala | Leu | |
| | | | | 85 | | | | | 90 | | | | | 95 | | |
| His | Leu | Asp | Gly | Ala | Leu | Ala | Leu | Leu | His | Ala | Cys | Cys | His | Ala | Cys | |
| | | | 100 | | | | | 105 | | | | | 110 | | | |
| Cys | Cys | Cys | Ala | Gly | Glu | Gly | Pro | Gly | Glu | Leu | Arg | Gly | Leu | Ala | Gln | |
| | | 115 | | | | | 120 | | | | | 125 | | | | |
| Thr | Gly | Ser | Arg | Arg | Val | Leu | Ala | Val | Thr | Glu | Gly | Arg | Arg | Arg | Asn | |
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<400> 230

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| Leu | Glu | Phe | Phe | Ile | Pro | Cys | Leu | Gly | Ser | Val | Asn | Glu | Ala | Cys | Leu | |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | | |
| Phe | Pro | Gly | Val | Ser | Phe | His | Gly | Leu | Tyr | Phe | Ser | Ser | Ser | Ser | Gly | |
| | | | 20 | | | | | 25 | | | | | 30 | | | |
| Ser | Phe | Ala | Gly | Ser | Ser | Leu | Trp | Lys | Leu | His | Glu | Arg | Trp | Leu | Gly | |

| 35 | | | | | | 40 | | | | | 45 | | | | |
|-----------|------------|------------|------------|-----------|-----------|------------|------------|------------|-----------|-----------|-----------|------------|------------|-----------|-----------|
| Leu | Gly 50 | Phe | Ala | Gly | Val | Tyr 55 | Ser | Arg | Val | Lys | Ala 60 | Glu | Trp | Asp | Leu |
| Arg 65 | Pro | Arg | Leu | Gly | Thr 70 | Thr | Gln | Ala | Glu | Lys 75 | Gly | Arg | Phe | His | His 80 |
| Ser | Gln | Cys | Pro | Pro 85 | His | Ser | Thr | Thr | Ser 90 | Ala | Arg | Ala | Pro | Pro 95 | Ser |
| Leu | Leu | Pro | His 100 | Pro | Ala | Ile | Val | Arg 105 | Gly | Ala | Thr | Val | Gly 110 | Arg | Arg |
| Val | Pro | Arg 115 | Arg | Gly | Leu | Phe | Leu 120 | Leu | Pro | Val | Pro | Glu 125 | Lys | Ala | Phe |
| Pro | Leu 130 | Leu | Lys | Phe | Lys | His 135 | | | | | | | | | |

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 <212> PRT
 <213> homo sapiens

<400> 231

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| Gly 1 | Gly | Pro | Val | Cys 5 | Trp | Glu | Pro | Gln | Val 10 | Thr | Pro | Phe | Ser | Ser 15 | Tyr |
| Ser | Val | Pro | Gly 20 | Ala | Ser | Cys | Pro | Pro 25 | Leu | Gln | Ile | Leu | Gly 30 | Lys | Glu |
| Asn | Val | Tyr 35 | Val | Ala | Gly | Tyr | Cys 40 | Met | Val | Thr | Ser | Glu 45 | Gly | Arg | Pro |
| Leu | Gly 50 | Thr | His | Leu | Pro | Thr 55 | Ala | Ala | Gln | Ala | Arg 60 | Ala | Gln | Ala | His |
| Leu 65 | Leu | Val | Leu | Arg | Pro 70 | Gln | Ile | Lys | Pro | Ser 75 | Pro | His | His | Met | Ala 80 |
| Ser | Asp | Arg | Phe | Leu 85 | Pro | Ser | Arg | Lys | Phe 90 | Cys | Gly | Cys | Ala | Val 95 | Leu |

<210> 232
 <211> 83
 <212> PRT
 <213> homo sapiens

<400> 232

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| Cys 1 | Cys | Gly | Glu | Gly 5 | Thr | Val | Asn | Asp | Gly 10 | Asn | Val | Pro | Ser | Gln 15 | Pro |
| Gly | Ser | Cys | Leu 20 | Thr | Trp | Val | Ser | Asn 25 | Pro | Thr | Leu | Pro | Ser 30 | Pro | Trp |
| Ser | Thr | Leu 35 | Gln | Arg | Ser | Arg | Gly 40 | Pro | Ala | Asn | Ala | Arg 45 | Glu | Val | Ser |
| Thr | Glu 50 | Lys | Ser | Leu | Gln | Asn 55 | Ser | His | Trp | Lys | Arg 60 | Arg | Asn | Lys | Gly |

| | | | | | | | | | | | | | | | |
|-----------|-----|-----|-----|-----|-----------|-----|-----|-----|-----|-----------|-----|-----|-----|-----|-----------|
| His 65 | Gly | Lys | Lys | Pro | Gln 70 | Gly | Arg | Asp | Arg | Pro 75 | Arg | Ser | Gln | Thr | Leu 80 |
|-----------|-----|-----|-----|-----|-----------|-----|-----|-----|-----|-----------|-----|-----|-----|-----|-----------|

| | | |
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| Gly | Arg | Glu |
|-----|-----|-----|

<210> 233
 <211> 52
 <212> PRT
 <213> homo sapiens

<400> 233

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| Ala 1 | Ser | Pro | Ala | Ser 5 | Leu | Ala | Gln | Ala | Thr 10 | Ser | Arg | Gln | Pro | Ala 15 | Pro |
| Ser | Pro | Arg | Ala 20 | Arg | Ser | His | Leu | Ala 25 | Thr | Ser | Thr | Ser | Trp 30 | Thr | Ser |
| Ser | Ala | Arg 35 | Ser | Asp | Ala | Gly | Cys 40 | Gly | Glu | Cys | Arg | Arg 45 | Asp | Pro | Gly |
| Ala | Pro 50 | Pro | Arg | | | | | | | | | | | | |

<210> 234
 <211> 94
 <212> PRT
 <213> homo sapiens

<400> 234

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| Leu 1 | Gly | Ser | Ala | Trp 5 | Gln | Gln | Leu | Arg | Arg 10 | Pro | Glu | Ala | Ser | Glu 15 | Thr |
| Leu | Arg | Leu | Val 20 | Gly | Thr | His | Arg | Pro 25 | Arg | Gln | Arg | Ala | Leu 30 | Pro | Arg |
| Gln | Arg | Val 35 | Ala | Ser | Pro | Pro | Pro 40 | Arg | Arg | Gly | Leu | Gly 45 | Leu | Thr | Ser |
| Pro | Pro 50 | Val | Arg | Leu | Gly | Gln 55 | Val | Val | Pro | Gly | Leu 60 | Met | Pro | Gly | Val |
| Val 65 | Ser | Ala | Ala | Gly | Thr 70 | Gln | Val | Arg | Arg | Leu 75 | Asp | Glu | Val | Pro | Ala 80 |
| Ser | Leu | Arg | Leu | Gln 85 | His | His | Leu | Gln | Leu 90 | Arg | Glu | Gly | Leu | | |

<210> 235
 <211> 95
 <212> PRT
 <213> homo sapiens

<400> 235

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| Ala 1 | Arg | Pro | Ser | Arg 5 | Ser | Trp | Arg | Trp | Cys 10 | Cys | Ser | Arg | Ser | Asp 15 | Ala |
| Gly | Thr | Ser | Ser 20 | Arg | Arg | Arg | Thr | Trp 25 | Val | Pro | Ala | Ala | Leu 30 | Thr | Thr |

| | | | | | | | | | | | | | | | |
|-----------|-----------|-----------|-----|-----------|-----------|-----------|-----------|-----|-----------|-----------|-----------|-----------|-----|-----------|-----------|
| Pro | Gly | Ile 35 | Arg | Pro | Gly | Thr | Thr 40 | Cys | Pro | Arg | Arg | Thr 45 | Gly | Gly | Glu |
| Val | Arg 50 | Pro | Ser | Pro | Arg | Arg 55 | Gly | Gly | Gly | Leu | Ala 60 | Thr | Arg | Cys | Leu |
| Gly 65 | Lys | Ala | Arg | Trp | Arg 70 | Gly | Leu | Cys | Val | Pro 75 | Thr | Ser | Arg | Arg | Val 80 |
| Ser | Asp | Ala | Ser | Gly 85 | Arg | Arg | Ser | Cys | Cys 90 | Gln | Ala | Glu | Pro | Arg 95 | |

<210> 236
 <211> 174
 <212> PRT
 <213> homo sapiens

<400> 236

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| Ala 1 | Pro | Thr | Asn | Thr 5 | Arg | Ser | Ser | Ser | Lys 10 | Phe | Ala | Thr | Ser | Gly 15 | Ser |
| Pro | Gly | Tyr | Pro 20 | Ile | Ala | Ser | Ser | Gly 25 | Ala | Ser | Pro | Glu | Val 30 | Arg | Gln |
| Arg | Arg | Thr 35 | Thr | Phe | Phe | Arg | Phe 40 | Arg | Pro | Gly | Glu | Ser 45 | Leu | Cys | Gly |
| Asp | Met 50 | Lys | Leu | Leu | Thr | His 55 | Asn | Leu | Leu | Ser | Ser 60 | His | Val | Arg | Gly |
| Val 65 | Gly | Ser | Arg | Gly | Phe 70 | Pro | Leu | Arg | Leu | Gln 75 | Ala | Thr | Glu | Val | Arg 80 |
| Ile | Cys | Pro | Val | Glu 85 | Phe | Asn | Pro | Asn | Phe 90 | Val | Ala | Arg | Met | Ile 95 | Pro |
| Lys | Val | Glu | Trp 100 | Ser | Ala | Phe | Leu | Glu 105 | Ala | Ala | Asp | Asn | Leu 110 | Arg | Leu |
| Ile | Gln | Val 115 | Pro | Lys | Gly | Pro | Val 120 | Glu | Gly | Tyr | Glu | Glu 125 | Asn | Glu | Glu |
| Phe | Leu 130 | Arg | Thr | Met | His | His 135 | Leu | Leu | Leu | Glu | Val 140 | Glu | Val | Ile | Glu |
| Gly 145 | Thr | Leu | Gln | Cys | Pro 150 | Glu | Ser | Gly | Arg | Met 155 | Phe | Pro | Ile | Ser | Arg 160 |
| Gly | Ile | Pro | Asn | Met 165 | Leu | Leu | Ser | Glu | Glu 170 | Glu | Thr | Glu | Ser | | |

<210> 237
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 <212> PRT
 <213> homo sapiens

<400> 237

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| Tyr 1 | Arg | Ala | Gln | Lys 5 | His | Cys | Val | Trp | Cys 10 | His | Trp | Val | Lys | Gly 15 | Trp |
| Gly | Tyr | Thr | Arg | Gln | Asn | Ser | Glu | Thr | Gly | Tyr | Arg | Ser | Thr | Lys | Ile |

| 20 | | | | | | | 25 | | | | | 30 | | | | |
|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|--|
| His | Ser | His 35 | Asn | Lys | Lys | Asn | Trp 40 | Arg | Leu | Ala | Gln | Ser 45 | Thr | Leu | Ser | |
| Phe | Leu 50 | Phe | Thr | Gln | Gln | His 55 | Val | Gly | Asp | Pro | Ala 60 | Ala | Asp | Gly | Glu | |
| His 65 | Thr | Ser | Arg | Phe | Arg 70 | Ala | Leu | Gln | Gly | Ala 75 | Leu | Tyr | His | Phe | His 80 | |
| Leu | Gln | Gln | Gln | Val 85 | Val | His | Gly | Pro | Gln 90 | Lys | Leu | Leu | Ile | Leu 95 | Leu | |
| Ile | Ser | Leu | Asn 100 | Arg | Pro | Phe | Arg | His 105 | Leu | Asp | Gln | Thr | Gln 110 | Val | Ile | |
| Gly | Arg | Leu 115 | Gln | Glu | Arg | Arg | Pro 120 | Leu | His | Phe | Arg | Tyr 125 | His | Thr | Arg | |
| His | Glu 130 | Val | Gly | Val | Glu | Phe 135 | His | Arg | Ala | Asp | Thr 140 | Asp | Leu | Gly | Gly | |
| Leu 145 | Glu | Ala | Gln | Gly | Glu 150 | Ala | Thr | Gly | Pro | His 155 | Pro | Pro | His | Met | Arg 160 | |
| Ala | Gln | Gln | Ile | Val 165 | Gly | Lys | Gln | Phe | His 170 | Val | Ala | Ala | Gln | Thr 175 | Leu | |
| Ala | Arg | Pro | Glu 180 | Pro | Glu | Lys | Gly | Arg 185 | Pro | Pro | Leu | Pro | His 190 | Phe | Arg | |
| Gly | Cys | Ser 195 | Thr | Arg | Cys | Tyr | Trp 200 | Ile | Ala | Arg | Arg | Thr 205 | Gly | Ser | Gly | |
| Glu | Leu 210 | Ala | Gly | Thr | Ser | Arg 215 | Val | Cys | Gly | Ser | Ser 220 | Phe | Leu | Tyr | Ala | |

Asn
225

<210> 238
 <211> 209
 <212> PRT
 <213> homo sapiens

<400> 238

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| Thr 1 | Phe | Asn | Glu | Lys 5 | Lys | Ile | Tyr | Asn | Thr 10 | Glu | Leu | Lys | Asn | Thr 15 | Val |
| Phe | Gly | Val | Ile 20 | Gly | Ser | Arg | Val | Gly 25 | Asp | Thr | His | Gly | Arg 30 | Ile | Arg |
| Lys | Gln | Gly 35 | Ile | Asp | Gln | Gln | Lys 40 | Tyr | Thr | Val | Ile | Thr 45 | Arg | Lys | Thr |
| Gly | Ala 50 | Trp | His | Asn | Gln | Leu 55 | Ser | Val | Ser | Ser | Ser 60 | Leu | Ser | Ser | Met |
| Leu 65 | Gly | Ile | Pro | Arg | Leu 70 | Met | Gly | Asn | Ile | Arg 75 | Pro | Asp | Ser | Gly | His 80 |

<210> 240
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 <212> PRT
 <213> homo sapiens

<400> 240

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| Ser 1 | Arg | Thr | Phe | Ser 5 | Phe | Leu | Ser | Phe | Leu 10 | His | Cys | Ala | Asn | Ile 15 | Leu |
| Thr | Leu | Phe | Val 20 | Ser | Phe | Gln | Glu | Pro 25 | His | Arg | His | Ile | Gln 30 | Val | Lys |
| Arg | Ser | Leu 35 | Asn | Lys | Cys | Leu | Gln 40 | Pro | Ser | Gln | Cys | Lys 45 | Asn | Lys | Tyr |
| Gln | Ser 50 | Ser | Arg | Arg | Ser | Ser 55 | Ser | Arg | Ala | Ala | Pro 60 | Lys | Val | Pro | Thr |
| Ala 65 | Thr | Pro | Asn | Asn | Tyr 70 | Lys | Ser | Val | Gln | Arg 75 | Glu | Cys | Trp | Arg | Glu 80 |
| Cys | Glu | Trp | Val | Cys 85 | Ala | Gly | Gly | His | Gly 90 | Gly | Ala | Val | Cys | Lys 95 | Ile |
| Gly | Val | Ala | Asn 100 | His | Arg | Thr | Arg | Ala 105 | Trp | Ser | Gly | Tyr | Pro 110 | Pro | Pro |
| Thr | Gln | Arg 115 | Gly | Arg | Ala | Ser | Pro 120 | His | Thr | Leu | Thr | Ala 125 | Glu | Phe | Ala |
| Leu | Gly 130 | Arg | Val | Lys | Lys | | | | | | | | | | |

<210> 241
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 <212> PRT
 <213> homo sapiens

<400> 241

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| Pro 1 | Ala | Arg | Thr | Arg 5 | Asp | Arg | Pro | Leu | Leu 10 | Ala | Arg | Phe | Gly | Leu 15 | Pro |
| Pro | Arg | Cys | Glu 20 | Pro | Val | Gly | Ala | Pro 25 | Leu | Ala | Ala | Leu | Ala 30 | Leu | Ala |
| Arg | Glu | Arg 35 | Arg | Glu | Arg | Gly | Arg 40 | Phe | Pro | Arg | Pro | Cys 45 | Lys | Cys | Leu |
| Phe | Phe 50 | Asn | Ser | Ser | Gln | Cys 55 | Glu | Leu | Cys | Cys | Glu 60 | Cys | Val | Arg | Gly |
| Gly 65 | Ala | Pro | Ala | Leu | Ser 70 | Arg | Arg | Arg | Val | Ala 75 | Thr | Pro | Cys | Pro | Cys 80 |
| Pro | Met | Val | Cys | Asn 85 | Ser | Asp | Phe | Ala | His 90 | Arg | Ser | Thr | Val | Pro 95 | Pro |
| Ser | Ala | His | Pro 100 | Phe | Thr | Leu | Thr | Pro 105 | Thr | Leu | Ser | Leu | Asn 110 | Thr | Phe |
| Ile | Ile | Val | Arg | Arg | Gly | Arg | Trp | Asp | Phe | Gly | Arg | Ser | Ala | Ala | Ala |

| | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|
| | | 115 | | | | | 120 | | | | | 125 | | | | |
| Thr | Ala | Ser | Gly | Gly | Leu | Ile | Phe | Ile | Phe | Ala | Leu | Arg | Trp | Leu | Lys | |
| | 130 | | | | | 135 | | | | | 140 | | | | | |
| Ala | Phe | Ile | | | | | | | | | | | | | | |
| 145 | | | | | | | | | | | | | | | | |

<210> 242
 <211> 88
 <212> PRT
 <213> homo sapiens

<400> 242

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|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|
| Pro | Val | Leu | Cys | Arg | Gly | Asn | Ser | Gly | Ser | Leu | Ser | Arg | Lys | Phe | Pro | |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | | |
| Pro | Lys | Pro | Gln | Lys | Pro | Ala | Asp | Lys | Asp | His | Pro | Arg | Thr | Cys | Val | |
| | | | 20 | | | | | 25 | | | | | 30 | | | |
| Tyr | Leu | Glu | Asn | Arg | Ser | Pro | Gly | Lys | Ser | Asp | Leu | Ser | Ala | Thr | Pro | |
| | | 35 | | | | | 40 | | | | | 45 | | | | |
| Gly | Arg | Ser | Gly | Leu | Glu | Ser | Gly | Tyr | Gln | Asn | Leu | Leu | Arg | Gln | His | |
| | 50 | | | | | 55 | | | | | 60 | | | | | |
| Gln | Pro | His | Gly | Arg | Cys | Pro | Thr | Trp | Pro | Gly | Ser | Arg | Trp | Lys | Val | |
| 65 | | | | | 70 | | | | | 75 | | | | | 80 | |
| Pro | Arg | Arg | Phe | Pro | Gly | Tyr | Gly | | | | | | | | | |
| | | | | 85 | | | | | | | | | | | | |

<210> 243
 <211> 164
 <212> PRT
 <213> homo sapiens

<400> 243

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| Gln | Asp | Gly | Cys | Pro | Asp | Ser | Gly | Asp | Phe | Ala | Ala | Leu | Gln | Ser | Leu | |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | | |
| Leu | Lys | Ala | Ser | Ser | Lys | Asp | Val | Val | Arg | Gln | Leu | Cys | Gln | Glu | Ser | |
| | | | 20 | | | | | 25 | | | | | 30 | | | |
| Phe | Ser | Ser | Ser | Ala | Leu | Gly | Leu | Lys | Lys | Leu | Leu | Asp | Val | Thr | Cys | |
| | | 35 | | | | | 40 | | | | | 45 | | | | |
| Ser | Ser | Leu | Ser | Val | Thr | Gln | Glu | Glu | Ala | Glu | Glu | Leu | Leu | Gln | Ala | |
| | 50 | | | | | 55 | | | | | 60 | | | | | |
| Leu | His | Arg | Leu | Thr | Arg | Leu | Val | Ala | Phe | Arg | Asp | Leu | Ser | Ser | Ala | |
| 65 | | | | | 70 | | | | | 75 | | | | | 80 | |
| Glu | Ala | Ile | Leu | Ala | Leu | Phe | Pro | Glu | Asn | Phe | His | Gln | Asn | Leu | Lys | |
| | | | | 85 | | | | | 90 | | | | | 95 | | |
| Asn | Leu | Leu | Thr | Lys | Ile | Ile | Leu | Glu | His | Val | Ser | Thr | Trp | Arg | Thr | |
| | | | 100 | | | | | 105 | | | | | 110 | | | |
| Glu | Ala | Gln | Ala | Asn | Gln | Ile | Ser | Leu | Pro | Arg | Leu | Val | Asp | Leu | Asp | |
| | | 115 | | | | | 120 | | | | | 125 | | | | |

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Trp | Arg | Val | Asp | Ile | Lys | Thr | Ser | Ser | Asp | Ser | Ile | Ser | Arg | Met | Ala |
| | 130 | | | | | 135 | | | | | 140 | | | | |
| Val | Ala | Pro | Pro | Gly | Leu | Val | Pro | Asp | Gly | Arg | Phe | Gln | Gly | Gly | Ser |
| 145 | | | | | 150 | | | | | 155 | | | | | 160 |
| Gln | Ala | Met | Gly | | | | | | | | | | | | |

<210> 244
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 <212> PRT
 <213> homo sapiens

<400> 244

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| Phe | Ala | Trp | Ala | Ser | Val | Leu | Gln | Val | Asp | Thr | Cys | Ser | Arg | Met | Ile |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Phe | Val | Ser | Arg | Phe | Leu | Arg | Phe | Trp | Trp | Lys | Phe | Ser | Gly | Lys | Arg |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Ala | Arg | Ile | Ala | Ser | Ala | Glu | Asp | Arg | Ser | Arg | Asn | Ala | Thr | Ser | Leu |
| | | 35 | | | | | 40 | | | | | 45 | | | |
| Val | Arg | Arg | Cys | Arg | Ala | Trp | Ser | Ser | Ser | Ser | Ala | Ser | Ser | Trp | Val |
| | 50 | | | | | 55 | | | | | 60 | | | | |
| Thr | Asp | Lys | Leu | Glu | His | Val | Thr | Ser | Lys | Ser | Phe | Phe | Lys | Pro | Arg |
| 65 | | | | | 70 | | | | | 75 | | | | | 80 |
| Ala | Glu | Leu | Glu | Lys | Leu | Ser | | | | | | | | | |
| | | | | 85 | | | | | | | | | | | |

<210> 245
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 <212> PRT
 <213> homo sapiens

<400> 245

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| Asp | Gly | Pro | Gly | Gly | Pro | Thr | Ala | His | Pro | His | Arg | Cys | Ala | His | Pro |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Pro | Gly | Val | Cys | Pro | Gly | Gln | Ala | Pro | Ala | His | Leu | Leu | Leu | Cys | Ala |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Ala | Ala | Pro | Gly | His | Pro | Gly | Gln | Gly | Gln | Gln | Pro | Ala | Ala | Gly | Gly |
| | | 35 | | | | | 40 | | | | | 45 | | | |
| Leu | Val | Gly | Asp | Ala | Asp | Arg | Ala | Gly | Asp | Leu | Glu | Cys | Ser | Pro | Arg |
| | 50 | | | | | 55 | | | | | 60 | | | | |
| Arg | Ile | Phe | Leu | His | Pro | Arg | Leu | His | Pro | Pro | Arg | His | Leu | Gly | Ser |
| 65 | | | | | 70 | | | | | 75 | | | | | 80 |
| Cys | His | Leu | Asp | Arg | Gly | Cys | Gly | Cys | Ala | Gly | Trp | Ser | Cys | Cys | Leu |
| | | | | 85 | | | | | 90 | | | | | 95 | |
| His | Leu | Arg | Glu | Thr | Gly | Trp | Tyr | Ile | Leu | Gly | Pro | Ala | Glu | Asp | Ser |
| | | | 100 | | | | | 105 | | | | | 110 | | |
| Ala | Ser | Ala | Gly | Ser | Phe | Leu | His | Ser | His | Arg | Cys | Pro | Gln | Thr | Leu |

115

120

125

Glu

<210> 246
 <211> 268
 <212> PRT
 <213> homo sapiens

<400> 246

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| Ala 1 | Ser | Pro | Ser | Asn 5 | Ser | Gln | Pro | Thr | Ser 10 | Pro | Ala | Ser | Ala | Pro 15 | Ala |
| Leu | Pro | Pro | Pro 20 | Ala | Arg | Arg | Ser | Arg 25 | Gly | Ala | Gln | Thr | Val 30 | Ser | Leu |
| Thr | Met | Gly 35 | Thr | Ala | Asp | Ser | Asp 40 | Glu | Met | Ala | Pro | Glu 45 | Ala | Pro | Gln |
| His | Thr 50 | His | Ile | Asp | Val | His 55 | Ile | His | Gln | Glu | Ser 60 | Ala | Leu | Ala | Lys |
| Leu 65 | Leu | Leu | Thr | Cys | Cys 70 | Ser | Ala | Leu | Arg | Pro 75 | Arg | Ala | Thr | Gln | Ala 80 |
| Arg | Gly | Ser | Ser | Arg 85 | Leu | Leu | Val | Ala | Ser 90 | Trp | Val | Met | Gln | Ile 95 | Val |
| Leu | Gly | Ile | Leu 100 | Ser | Ala | Val | Leu | Gly 105 | Gly | Phe | Phe | Tyr | Ile 110 | Arg | Asp |
| Tyr | Thr | Leu 115 | Leu | Val | Thr | Ser | Gly 120 | Ala | Ala | Ile | Trp | Thr 125 | Gly | Ala | Val |
| Ala | Val 130 | Leu | Ala | Gly | Ala | Ala 135 | Ala | Phe | Ile | Tyr | Glu 140 | Lys | Arg | Gly | Gly |
| Thr 145 | Tyr | Trp | Ala | Leu | Leu 150 | Arg | Thr | Leu | Leu | Ala 155 | Leu | Ala | Ala | Phe | Ser 160 |
| Thr | Ala | Ile | Ala | Ala 165 | Leu | Lys | Leu | Trp | Asn 170 | Glu | Asp | Phe | Arg | Tyr 175 | Gly |
| Tyr | Ser | Tyr | Tyr 180 | Asn | Ser | Ala | Cys | Arg 185 | Ile | Ser | Ser | Ser | Ser 190 | Asp | Trp |
| Asn | Thr | Pro 195 | Ala | Pro | Thr | Gln | Ser 200 | Pro | Glu | Glu | Val | Arg 205 | Arg | Leu | His |
| Leu | Cys 210 | Thr | Ser | Phe | Met | Asp 215 | Met | Leu | Lys | Ala | Leu 220 | Phe | Arg | Thr | Leu |
| Gln 225 | Ala | Met | Leu | Leu | Gly 230 | Val | Trp | Ile | Leu | Leu 235 | Leu | Leu | Ala | Ser | Leu 240 |
| Ala | Pro | Leu | Trp | Leu 245 | Tyr | Cys | Trp | Arg | Met 250 | Phe | Pro | Thr | Lys | Gly 255 | Lys |
| Arg | Asp | Gln | Lys 260 | Glu | Met | Leu | Glu | Val 265 | Ser | Gly | Ile | | | | |

<210> 247

<211> 103
 <212> PRT
 <213> homo sapiens

<400> 247

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| Asp | Cys | Thr | Gln | Asp | Pro | Gln | His | Asp | Leu | His | His | Pro | Arg | Gly | His |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Gln | Gln | Pro | Ala | Ala | Ala | Pro | Gly | Leu | Gly | Gly | Pro | Gly | Pro | Gln | Arg |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Arg | Ala | Ala | Gly | Glu | Gln | Glu | Leu | Gly | Gln | Gly | Arg | Leu | Leu | Val | Asp |
| | | 35 | | | | | 40 | | | | | 45 | | | |
| Val | His | Ile | Asp | Val | Gly | Val | Leu | Trp | Gly | Leu | Arg | Gly | His | Leu | Ile |
| | 50 | | | | | 55 | | | | | 60 | | | | |
| Thr | Val | Gly | Cys | Ser | His | Cys | Gln | Gly | His | Ser | Leu | Arg | Ser | Ser | Gly |
| 65 | | | | | 70 | | | | | 75 | | | | | 80 |
| Pro | Ala | Ser | Gly | Arg | Arg | Glu | Gly | Trp | Gly | Ala | Gly | Trp | Arg | Ser | Gly |
| | | | | 85 | | | | | 90 | | | | | 95 | |
| Leu | Arg | Val | Gly | Gly | Gly | Gly | | | | | | | | | |
| | | | 100 | | | | | | | | | | | | |

<210> 248
 <211> 86
 <212> PRT
 <213> homo sapiens

<400> 248

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| Gly | Ser | Arg | Arg | Arg | Asp | Gly | Gly | Gly | Ala | Gly | Ala | Ala | Pro | Val | Ala |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Pro | Arg | Ala | Leu | Gly | Arg | Arg | Ala | Arg | Ala | Gly | Arg | Cys | Ser | Glu | Asp |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Glu | Gly | Gly | Gly | Gly | Ala | Gln | Arg | Val | Trp | Gly | Glu | Gln | Pro | Val | Leu |
| | | 35 | | | | | 40 | | | | | 45 | | | |
| Ala | Ser | Gly | Gln | Ser | Pro | Pro | Gly | Gln | Glu | Gly | Ser | Phe | Thr | Arg | Val |
| | 50 | | | | | 55 | | | | | 60 | | | | |
| Trp | Thr | Arg | Ala | Ser | Leu | Pro | Thr | Leu | Gly | Gln | Val | Leu | Gln | Pro | Gly |
| 65 | | | | | 70 | | | | | 75 | | | | | 80 |
| Gly | Val | His | Val | Gln | Val | | | | | | | | | | |
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| Ala | Arg | Gly | Gly | Ala | Met | Ala | Ala | Gly | Leu | Ala | Arg | Leu | Leu | Leu | Leu |
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| Leu | Gly | Leu | Ser | Ala | Gly | Gly | Pro | Ala | Pro | Ala | Gly | Ala | Ala | Lys | Met |

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|--------------------|------------|------------|------------|-----------|------------|------------|------------|------------|-----------|-----------|------------|------------|------------|-----------|-----------|
| Lys | Val | Val 35 | Glu | Glu | Pro | Asn | Ala 40 | Phe | Gly | Val | Asn | Asn 45 | Pro | Phe | Leu |
| Pro | Gln 50 | Ala | Ser | Arg | Leu | Gln 55 | Ala | Lys | Arg | Asp | Pro 60 | Ser | Pro | Val | Ser |
| Gly 65 | Pro | Val | His | Leu | Phe 70 | Arg | Leu | Ser | Gly | Lys 75 | Cys | Phe | Ser | Leu | Val 80 |
| Glu | Ser | Thr | Tyr | Lys 85 | Tyr | Glu | Phe | Cys | Pro 90 | Phe | His | Asn | Val | Thr 95 | Gln |
| His | Glu | Gln | Thr 100 | Phe | Arg | Trp | Asn | Ala 105 | Tyr | Ser | Gly | Ile | Leu 110 | Gly | Ile |
| Trp | His | Glu 115 | Trp | Glu | Ile | Ala | Asn 120 | Asn | Thr | Phe | Thr | Gly 125 | Met | Trp | Met |
| Arg | Asp 130 | Gly | Asp | Asp | Cys | Arg 135 | Ser | Arg | Ser | Arg | Gln 140 | Ser | Lys | Val | Glu |
| Leu 145 | Ala | Cys | Ala | Ser | Pro 150 | Ser | Asn | Cys | Val | | | | | | |
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| Pro 1 | Leu | Asp | Ala | Val 5 | Ala | Arg | Ala | Arg | Thr 10 | Arg | Gln | Leu | His | Leu 15 | Ala |
| Leu | Pro | Ala | Pro 20 | Gly | Thr | Ala | Val | Val 25 | Thr | Val | Pro | His | Pro 30 | His | Ala |
| Arg | Glu | Gly 35 | Val | Val | Gly | Asp | Leu 40 | Pro | Leu | Val | Pro | Asp 45 | Ala | Glu | Asp |
| Pro | Thr 50 | Val | Gly | Val | Pro | Ala 55 | Glu | Gly | Leu | Leu | Val 60 | Leu | Gly | His | Val |
| Val 65 | Glu | Arg | Ala | Glu | Leu 70 | Ile | Leu | Val | Arg | Gly 75 | Leu | His | Gln | Ala | Glu 80 |
| Ala | Leu | Ala | Arg | Glu 85 | Ser | Glu | Glu | Met | His 90 | Gly | Ser | Arg | His | Gly 95 | |
| <210> 251 | | | | | | | | | | | | | | | |
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| Lys 1 | Val | Thr | Asp | Gly 5 | His | Thr | Arg | Thr | Pro 10 | Arg | Ser | Gly | Val | Pro 15 | Arg |
| Gln | His | Glu | Ala 20 | Gly | Ser | Pro | Gly | Leu 25 | Thr | Ala | Ser | His | Ala 30 | Met | Ser |

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|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Ile | His | Leu 35 | Ala | Gly | Ser | Leu | Thr 40 | Ala | Met | Asp | Ser | Ile 45 | Cys | Ala | Ser |
| Glu | Arg 50 | Ser | Gln | Gly | Val | Trp 55 | Arg | Ala | Pro | Thr | Pro 60 | Gly | Cys | Gln | Gly |
| Leu 65 | Ser | Pro | Gly | Pro | Arg 70 | Pro | Gly | Glu | Leu | Pro 75 | Gly | Gly | Ser | Ser | Pro 80 |
| Glu | Glu | Arg | Leu | Gly 85 | Arg | Leu | Ala | Val | Ala 90 | Gly | Pro | Pro | Arg | Gly 95 | Ala |
| Gln | Asn | Val | Ser 100 | Gln | Ala | Gly | Pro | Glu 105 | Ala | Glu | Ala | Pro | Pro 110 | Leu | Arg |
| Phe | Gly | His 115 | Ala | Trp | Gly | Ala | Gln 120 | Thr | Pro | Arg | Leu | Gly 125 | Ala | Pro | Gly |
| Pro | Trp 130 | Thr | Pro | Leu | Pro | Thr 135 | Leu | Pro | Ser | His | Ile 140 | Pro | Pro | Phe | Trp |
| Ser 145 | Gln | Thr | Pro | Ala | Gln 150 | Arg | Lys | Glu | Gly | Phe 155 | Thr | Glu | Glu | Gly | Gln 160 |
| Gly | Arg | Ala | Trp | Pro 165 | Gln | Gly | Gly | Asp | Glu 170 | Asp | Ile | Ser | Gly | Pro 175 | Gly |
| Ser | Cys | Arg | Leu 180 | Leu | Trp | Glu | Glu | Glu 185 | Pro | Cys | Val | Cys | Lys 190 | Leu | Leu |
| Gly | Leu | Ala 195 | Ala | Arg | Pro | Thr | Ala 200 | Gly | Pro | Ser | Leu | Asp 205 | Pro | Cys | Thr |
| Trp | Pro 210 | Ser | Ser | Cys | Pro | Leu 215 | Ala | Ala | Pro | Gly | Leu 220 | Gly | Thr | Gly | Ile |
| Glu 225 | Pro | Arg | Gly | Leu | Gly 230 | Trp | Leu | Gly | Gln | Gly 235 | Arg | Asp | Arg | Glu | Gly 240 |

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| Gly 1 | Leu | Val | Met | Pro 5 | Gly | Glu | Leu | Arg | Arg 10 | Pro | Gly | Leu | Gly | Pro 15 | Gln |
| Ala | His | Gly | Leu 20 | Pro | Ser | Pro | Leu | Cys 25 | Pro | Pro | Ile | Phe | Pro 30 | Leu | Phe |
| Gly | Pro | Arg 35 | His | Gln | His | Lys | Glu 40 | Arg | Arg | Gly | Ser | Gln 45 | Arg | Lys | Ala |
| Arg | Ala 50 | Glu | Pro | Gly | Pro | Arg 55 | Glu | Gly | Met | Arg | Thr 60 | Phe | Pro | Val | Gln |
| Val 65 | Ala | Ala | Gly | Cys | Ser 70 | Gly | Arg | Lys | Ser | His 75 | Ala | Ser | Val | Asn | Cys 80 |
| Trp | Gly | Trp | Arg | Pro | Ala | Pro | Leu | Gln | Gly | Pro | Ala | Leu | Thr | Pro | Ala |

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|--------------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Arg | Gly | His | Pro 100 | Ala | Ala | Leu | Trp | Leu 105 | Pro | Leu | Ala | Leu | Ala 110 | Gln | Ala |
| Ser | Ser | Leu 115 | Glu | Gly | Trp | Ala | Gly 120 | Trp | Ala | Arg | Ala | Gly 125 | Thr | Gly | Arg |
| Gly | Ser 130 | Thr | Ser | Asp | Pro | Asp 135 | Val | Gly | Trp | Leu | Cys 140 | Pro | Pro | Arg | Arg |
| Glu 145 | Ala | Gln | Gln | Thr | Ser 150 | Tyr | Thr | Lys | Ala | Lys 155 | Ser | Thr | Ile | Gly | Glu 160 |
| Pro | Arg | Ser | His | Phe 165 | Met | Gly | Arg | Arg | Pro 170 | Arg | Pro | Gln | Gly | Pro 175 | Gln |
| Ser | Lys | Ala | Arg 180 | Gly | Arg | Phe | Ile | Pro 185 | Glu | Asp | Ser | Pro | Pro 190 | Gly | Ala |
| Ala | Pro | Ala 195 | Trp | Gly | Gly | Val | Ser 200 | Arg | Pro | Leu | Gly | Cys 205 | Leu | Ser | Val |
| Cys | Gly 210 | Thr | Pro | Trp | Ser | Thr 215 | Pro | | | | | | | | |
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| Val 1 | Leu | Arg | Arg | Leu 5 | Tyr | Ile | Tyr | Ile | Leu 10 | Tyr | Ile | Thr | Asn | Met 15 | Lys |
| Trp | Phe | Ser | Thr 20 | Gln | Pro | Leu | Trp | Leu 25 | Asn | Thr | Lys | Gln | Arg 30 | Ser | His |
| Arg | Arg | Gly 35 | Pro | Gly | Pro | Pro | Pro 40 | Ala | Pro | Leu | Ser | Gly 45 | Val | Leu | Gly |
| Ser | Arg 50 | Gly | Leu | Pro | His | His 55 | Pro | Ser | Gln | Gly | Trp 60 | Gly | Arg | Ala | Gly |
| Pro 65 | Arg | Ala | Gly | Ala | Asn 70 | Val | Ala | Trp | Asn | Ser 75 | Asn | Cys | Ile | Val | Arg 80 |
| Trp | Val | Gly | Gly | Gln 85 | Trp | Ala | Arg | Gly | Cys 90 | Ser | Gln | Pro | Gly | Pro 95 | Phe |
| Thr | Thr | Asn | Leu 100 | Ala | Met | Thr | Cys | Gly 105 | Gly | Pro | Trp | Gly | Ser 110 | Gly | Cys |
| Leu | Leu | Gly 115 | Ser | Thr | Leu | Ser | Glu 120 | Val | Ser | Pro | Trp | Ala 125 | Pro | Pro | Ser |
| Cys | Pro 130 | Gln | Gly | His | Pro | Val 135 | Leu | Pro | Thr | Arg | Leu 140 | Trp | Ala | Trp | Gly |
| Leu 145 | Gln | Asp | Pro | Leu | Cys 150 | Arg | Val | Arg | Val | Gly 155 | Ala | Gly | His | Gly | Ser 160 |

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|-----|------------|------------|------------|------------|-----|------------|------------|------------|------------|-----|-----|------------|------------|------------|-----|
| Arg | His | Gln | Pro | Asp 165 | Ala | Pro | Val | Gly | Val 170 | Ala | Arg | Ser | Trp | Asp 175 | Gly |
| Val | Val | Arg | Asn 180 | Thr | Ala | Pro | Lys | Thr 185 | Gln | Asn | Lys | Asn | Thr 190 | Thr | Asn |
| Gly | Arg | Arg 195 | Ser | Pro | Pro | Pro | Thr 200 | Glu | Val | Gly | Phe | Glu 205 | Pro | Leu | Leu |
| Ile | Phe 210 | Pro | Val | Ser | Phe | Leu 215 | Gln | Pro | Trp | | | | | | |

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| Arg 1 | Asp | Gly | Gly | Gly 5 | Ala | Gly | Ala | Ala | Pro 10 | Val | Ala | Pro | Arg | Ala 15 | Leu |
| Gly | Arg | Arg | Ala 20 | Arg | Ala | Gly | Arg | Cys 25 | Ser | Glu | Asp | Glu | Gly 30 | Gly | Gly |
| Gly | Ala | Gln 35 | Arg | Val | Trp | Val | Ser 40 | Ser | Leu | Ala | Gly | Trp 45 | Arg | Leu | Glu |
| Arg | Gly 50 | Thr | Ala | Arg | Ala | Arg 55 | Ser | Pro | Leu | Thr | Leu 60 | Pro | Leu | Pro | Val |
| Gly 65 | Gly | Thr | Thr | Arg | Ser 70 | Cys | Leu | Arg | Pro | Val 75 | Ala | Ser | Arg | Pro | |

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| Leu 1 | Gly | Leu | Glu | Ala 5 | Thr | Gly | Leu | Arg | Gln 10 | Glu | Arg | Val | Val | Pro 15 | Pro |
| Thr | Gly | Ser | Gly 20 | Lys | Val | Ser | Gly | Glu 25 | Arg | Ala | Arg | Ala | Val 30 | Pro | Arg |
| Ser | Ser | Arg 35 | Gln | Pro | Ala | Arg | Leu 40 | Leu | Thr | Gln | Thr | Arg 45 | Trp | Ala | Pro |
| Pro | Pro 50 | Pro | Ser | Ser | Ser | Leu 55 | His | Leu | Pro | Ala | Arg 60 | Ala | Arg | Arg | Pro |
| Arg 65 | Ala | Arg | Gly | Ala | Thr 70 | Gly | Ala | Ala | Pro | Ala 75 | Pro | Pro | Pro | Ser | |

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| Trp 1 | Pro | Gly | Gly | Asp 5 | Trp | Pro | Glu | Ala | Arg 10 | Thr | Gly | Cys | Ser | Thr 15 | Tyr |
| Gly | Lys | Arg | Gln 20 | Gly | Gln | Arg | Gly | Thr 25 | Gly | Pro | Gly | Arg | Pro 30 | Pro | Leu |
| Glu | Pro | Pro 35 | Ala | Arg | Glu | Ala | Ala 40 | His | Pro | Asn | Ala | Leu 45 | Gly | Ser | Ser |
| Thr | Thr 50 | Phe | Ile | Phe | Ala | Ala 55 | Pro | Ala | Gly | Ala | Gly 60 | Pro | Pro | Ala | Glu |
| Ser 65 | Pro | Arg | Ser | Asn | Arg 70 | Ser | Arg | Ala | Ser | Pro 75 | Ala | Ala | Ile | Ala | |

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| Gly 1 | His | Leu | Gly | Gly 5 | Pro | Thr | Gly | Ser | Val 10 | Cys | Ser | Arg | Ile | Leu 15 | Leu |
| Ala | Ser | Ser | Pro 20 | Phe | Tyr | Met | Asn | Cys 25 | Cys | Ile | Asn | Lys | His 30 | Arg | Val |
| Pro | Glu | Thr 35 | Thr | Glu | Val | Ile | Ile 40 | Leu | Pro | Thr | Glu | Cys 45 | Trp | Pro | Gly |
| Gln | Ala | Trp 50 | | | | | | | | | | | | | |

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|----------|-----|-----------|-----------|----------|-----|-----|-----------|-----------|-----------|-----|-----|-----------|-----------|-----------|-----|
| Gly 1 | Gly | Gly | Phe | Leu 5 | Gly | Gln | Ile | Asp | Lys 10 | Ser | Lys | Asp | Asn | Ile 15 | Ser |
| Leu | Val | Thr | Val 20 | Ile | Gln | Leu | His | Ser 25 | Tyr | Thr | Val | Ala | Leu 30 | Phe | Gly |
| Leu | Ser | His 35 | Glu | Glu | Val | Leu | Val 40 | Thr | Asn | Tyr | Val | Phe 45 | Val | Gly | Cys |
| Phe | | | | | | | | | | | | | | | |

<210> 259
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 <212> PRT
 <213> homo sapiens

<400> 259

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| Ala 1 | Phe | Thr | Arg | Asn 5 | Thr | Thr | Asn | Lys | Val 10 | Ser | Asp | Met | Leu | Ala 15 | Asn |
| Gln | Ala | Arg | Leu | Arg | Ser | Leu | Arg | Arg | Pro | Asn | Trp | Leu | Cys | Leu | Leu |

| | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|
| | | | 20 | | | | | 25 | | | | | 30 | | | |
| Lys | Asp | Ser | Ser | Gly | Leu | Val | Ser | Ile | Leu | His | Glu | Leu | Leu | His | Lys | |
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<210> 260
 <211> 179
 <212> PRT
 <213> homo sapiens

<400> 260

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| Pro | Gly | Ile | Ser | Val | Ser | Val | Asp | Lys | Met | Glu | Ser | Ser | Pro | Phe | Asn | |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | | |
| Arg | Arg | Gln | Trp | Thr | Ser | Leu | Ser | Leu | Arg | Val | Thr | Ala | Lys | Glu | Leu | |
| | | | 20 | | | | | 25 | | | | | 30 | | | |
| Ser | Leu | Val | Asn | Lys | Asn | Lys | Ser | Ser | Ala | Ile | Val | Glu | Ile | Phe | Ser | |
| | | 35 | | | | | 40 | | | | | 45 | | | | |
| Lys | Tyr | Gln | Lys | Ala | Ala | Glu | Glu | Thr | Asn | Met | Glu | Lys | Lys | Arg | Ser | |
| | 50 | | | | | 55 | | | | | 60 | | | | | |
| Asn | Thr | Glu | Asn | Leu | Ser | Gln | His | Phe | Arg | Lys | Gly | Thr | Leu | Thr | Val | |
| 65 | | | | | 70 | | | | | 75 | | | | | 80 | |
| Leu | Lys | Lys | Lys | Trp | Glu | Asn | Pro | Gly | Leu | Gly | Ala | Glu | Ser | His | Thr | |
| | | | | 85 | | | | | 90 | | | | | 95 | | |
| Asp | Ser | Leu | Arg | Asn | Ser | Ser | Thr | Glu | Ile | Arg | His | Arg | Ala | Asp | His | |
| | | | 100 | | | | | 105 | | | | | 110 | | | |
| Pro | Pro | Ala | Glu | Val | Thr | Ser | His | Ala | Ala | Ser | Gly | Ala | Lys | Ala | Asp | |
| | | 115 | | | | | 120 | | | | | 125 | | | | |
| Gln | Glu | Glu | Gln | Ile | His | Pro | Arg | Ser | Arg | Leu | Arg | Ser | Pro | Pro | Glu | |
| | 130 | | | | | 135 | | | | | 140 | | | | | |
| Ala | Leu | Val | Gln | Gly | Arg | Tyr | Pro | His | Ile | Lys | Asp | Gly | Glu | Asp | Leu | |
| 145 | | | | | 150 | | | | | 155 | | | | | 160 | |
| Lys | Asp | His | Ser | Thr | Glu | Ser | Lys | Lys | Met | Glu | Asn | Cys | Leu | Gly | Glu | |
| | | | | 165 | | | | | 170 | | | | | 175 | | |
| Ser | Arg | His | | | | | | | | | | | | | | |

<210> 261
 <211> 56
 <212> PRT
 <213> homo sapiens

<400> 261

| | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|
| Gln | Ala | Thr | Leu | Leu | Leu | Glu | Pro | Lys | Leu | Thr | Lys | Lys | Asn | Lys | Ser | |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | | |
| Thr | Pro | Asp | Leu | Asp | Ser | Gly | His | Leu | Leu | Lys | Pro | Ser | Phe | Arg | Val | |
| | | | 20 | | | | | 25 | | | | | 30 | | | |
| Asp | Ile | Pro | Thr | Ser | Arg | Thr | Val | Arg | Ile | Leu | Lys | Thr | Thr | Gln | Gln | |
| | | 35 | | | | | 40 | | | | | 45 | | | | |

Lys Val Lys Lys Trp Lys Ile Val
50 55

<210> 262
<211> 94
<212> PRT
<213> homo sapiens

<400> 262

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|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Asp 1 | Ser | Ala | Pro | Ser 5 | Pro | Gly | Phe | Ser | His 10 | Phe | Phe | Phe | Asn | Thr 15 | Val |
| Arg | Val | Pro | Phe 20 | Leu | Lys | Cys | Trp | Glu 25 | Arg | Phe | Ser | Val | Leu 30 | Leu | Leu |
| Phe | Phe | Ser 35 | Met | Phe | Val | Ser | Ser 40 | Ala | Ala | Phe | Trp | Tyr 45 | Leu | Glu | Asn |
| Ile | Ser 50 | Thr | Ile | Ala | Asp | Asp 55 | Leu | Phe | Leu | Leu | Thr 60 | Arg | Glu | Ser | Ser |
| Leu 65 | Ala | Val | Thr | Leu | Asn 70 | Asp | Ser | Glu | Val | His 75 | Cys | Arg | Leu | Leu | Asn 80 |
| Gly | Asp | Asp | Ser | Ile 85 | Leu | Ser | Thr | Asp | Thr 90 | Glu | Ile | Pro | Gly | | |

<210> 263
<211> 75
<212> PRT
<213> homo sapiens

<400> 263

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|-----------|-----------|-----------|-----------|----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----|
| Val 1 | Met | Ser | Asp | Pro 5 | Ala | Asp | Lys | Ala | Ala 10 | Arg | Ala | Asp | Ser | Ala 15 | Arg |
| Ala | Ala | Arg | Gly 20 | Lys | Arg | Lys | Lys | Asn 25 | Val | Glu | Glu | Asn | Met 30 | Ala | Tyr |
| Ser | Ala | Leu 35 | Met | Glu | Val | Ala | Gly 40 | Tyr | Cys | Leu | Ile | Glu 45 | Arg | Met | Leu |
| Trp | Asn 50 | Pro | Met | Leu | Lys | Ile 55 | Lys | Ser | Val | Trp | Leu 60 | Cys | Ser | Tyr | Ala |
| Val 65 | Met | Val | Ile | Pro | Arg 70 | Gln | Leu | Ala | Lys | Val 75 | | | | | |

<210> 264
<211> 74
<212> PRT
<213> homo sapiens

<400> 264

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|----------|-----|-----|-----------|----------|-----|-----|-----|-----------|-----------|-----|-----|-----|-----------|-----------|-----|
| Ala 1 | Met | Phe | Ser | Ser 5 | Thr | Phe | Phe | Phe | Leu 10 | Leu | Pro | Arg | Ala | Ala 15 | Arg |
| Ala | Glu | Ser | Ala 20 | Arg | Ala | Ala | Leu | Ser 25 | Ala | Gly | Ser | Leu | Ile 30 | Thr | Tyr |

| | | | | | | | | | | | | | | | |
|-----------|-----------|-----------|-----|-----|-----------|-----------|-----------|-----|-----|-----|-----------|-----------|-----|-----|-----|
| Ala | Phe | Tyr 35 | Lys | Arg | Leu | Pro | Lys 40 | Lys | Lys | Leu | Leu | Thr 45 | Arg | Asn | Val |
| Asp | Lys 50 | Pro | Leu | Lys | Ala | Asn 55 | Lys | Gln | Gln | Thr | Val 60 | Val | Phe | Ala | Phe |
| Ser 65 | Tyr | Ser | Trp | Gln | Ala 70 | Glu | Val | Arg | Ala | | | | | | |

<210> 265
 <211> 63
 <212> PRT
 <213> homo sapiens

<400> 265

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|----------|-----------|-----------|-----------|----------|-----|-----------|-----------|-----------|-----------|-----|-----------|-----------|-----------|-----------|-----|
| Asp 1 | Ser | Lys | Ala | Phe 5 | Ser | Leu | Leu | Ser | Ser 10 | Asn | Gln | Pro | Leu | Pro 15 | Ser |
| Lys | Leu | Ser | Arg 20 | Pro | Cys | Phe | Pro | Pro 25 | His | Phe | Phe | Phe | Phe 30 | Tyr | Leu |
| Glu | Pro | Leu 35 | Glu | Pro | Asn | Arg | Leu 40 | Glu | Pro | Pro | Cys | Leu 45 | Leu | Asp | His |
| Ser | Ser 50 | Pro | Thr | His | Phe | Ile 55 | Lys | Gly | Tyr | Pro | Lys 60 | Arg | Asn | Cys | |

<210> 266
 <211> 94
 <212> PRT
 <213> homo sapiens

<400> 266

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|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Arg 1 | Arg | Gly | Ser | Gly 5 | Ser | Arg | Ser | Ser | Met 10 | Ala | Pro | Val | Leu | Ala 15 | Ser |
| Met | Leu | Trp | Met 20 | Ser | Thr | Arg | Gly | Thr 25 | Ala | Met | Thr | Ser | Thr 30 | Ser | Leu |
| Cys | Thr | Ser 35 | Arg | Ala | Arg | Ser | Arg 40 | Pro | Met | Pro | Ser | Ser 45 | Ser | Ser | Pro |
| Thr | Pro 50 | Thr | Ala | Trp | Arg | Cys 55 | Cys | Cys | Ala | Thr | Arg 60 | Thr | Arg | Val | Ser |
| Thr 65 | Ser | Thr | Arg | Thr | Gly 70 | Ala | Ser | Leu | Arg | Met 75 | Trp | Cys | Cys | Ser | Gly 80 |
| Gly | Arg | Cys | Leu | Leu 85 | Leu | Trp | Pro | Thr | Ser 90 | Ala | Pro | Thr | Arg | | |

<210> 267
 <211> 254
 <212> PRT
 <213> homo sapiens

<400> 267

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|----------|-----|-----|-----|----------|-----|-----|-----|-----|-----------|-----|-----|-----|-----|-----------|-----|
| Gly 1 | Asp | Arg | Lys | Pro 5 | Leu | Tyr | His | Tyr | Gly 10 | Arg | Gly | Met | Asn | Pro 15 | Ala |
|----------|-----|-----|-----|----------|-----|-----|-----|-----|-----------|-----|-----|-----|-----|-----------|-----|

| | | | | | | | | | | | | | | | |
|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Asp | Lys | Pro | Ala 20 | Trp | Ala | Arg | Glu | Val 25 | Lys | Glu | Arg | Thr | Arg 30 | Met | Asn |
| Lys | Gln | Gln 35 | Asn | Ser | Pro | Leu | Ala 40 | Lys | Ser | Lys | Pro | Gly 45 | Ser | Thr | Gly |
| Pro | Glu 50 | Pro | Pro | Ser | Pro | Gln 55 | Ala | Ser | Pro | Gly | Pro 60 | Pro | Gly | Leu | Pro |
| Trp 65 | Ala | Pro | Lys | Pro | Tyr 70 | His | Lys | Phe | Met | Ala 75 | Phe | Lys | Ser | Phe | Ala 80 |
| Asp | Leu | Pro | His | Arg 85 | Pro | Leu | Leu | Val | Asp 90 | Leu | Thr | Val | Glu | Glu 95 | Gly |
| Gln | Arg | Leu | Lys 100 | Val | Ile | Tyr | Gly | Ser 105 | Ser | Ala | Gly | Phe | His 110 | Ala | Val |
| Asp | Val | Asp 115 | Ser | Gly | Asn | Ser | Tyr 120 | Asp | Ile | Tyr | Ile | Pro 125 | Val | His | Ile |
| Gln | Ser 130 | Gln | Ile | Thr | Pro | His 135 | Ala | Ile | Ile | Phe | Leu 140 | Pro | Asn | Thr | Asp |
| Gly 145 | Met | Glu | Met | Leu | Leu 150 | Cys | Tyr | Glu | Asp | Glu 155 | Gly | Val | Tyr | Val | Asn 160 |
| Thr | Tyr | Gly | Arg | Ile 165 | Ile | Lys | Asp | Val | Val 170 | Leu | Gln | Trp | Gly | Glu 175 | Met |
| Pro | Thr | Ser | Val 180 | Ala | Tyr | Ile | Cys | Ser 185 | Asn | Gln | Ile | Met | Gly 190 | Trp | Gly |
| Glu | Lys | Ala 195 | Ile | Glu | Ile | Arg | Ser 200 | Val | Glu | Thr | Gly | His 205 | Leu | Asp | Gly |
| Val | Phe 210 | Met | His | Lys | Arg | Ala 215 | Gln | Arg | Leu | Lys | Phe 220 | Leu | Cys | Glu | Arg |
| Asn 225 | Asp | Lys | Val | Phe | Phe 230 | Ala | Ser | Val | Arg | Ser 235 | Gly | Gly | Ser | Ser | Gln 240 |
| Val | Tyr | Phe | Met | Thr 245 | Leu | Asn | Arg | Asn | Cys 250 | Ile | Met | Asn | Trp | | |

<210> 268

<211> 231

<212> PRT

<213> homo sapiens

<400> 268

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|----------|-----------|-----------|-----------|----------|-----|-----------|-----------|-----------|-----------|-----|-----------|-----------|-----------|-----------|-----|
| Gly 1 | Lys | Lys | His | Leu 5 | Val | Ile | Pro | Leu | Thr 10 | Gln | Glu | Leu | Glu | Pro 15 | Leu |
| Ser | Ser | Phe | Val 20 | His | Glu | Asp | Pro | Val 25 | Glu | Val | Ala | Arg | Leu 30 | His | Arg |
| Ala | Asp | Leu 35 | Asn | Gly | Phe | Leu | Thr 40 | Pro | Ala | His | Tyr | Leu 45 | Val | Gly | Ala |
| Asp | Val 50 | Gly | His | Arg | Ser | Arg 55 | His | Leu | Pro | Pro | Leu 60 | Gln | His | His | Ile |

| | | | | | | | | | | | | | | | |
|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Leu 65 | Asn | Asp | Ala | Pro | Val 70 | Arg | Val | Asp | Val | Asp 75 | Thr | Leu | Val | Leu | Val 80 |
| Ala | Gln | Gln | His | Leu 85 | His | Ala | Val | Gly | Val 90 | Gly | Glu | Glu | Asp | Asp 95 | Gly |
| Met | Gly | Arg | Asp 100 | Leu | Ala | Leu | Asp | Val 105 | His | Arg | Asp | Val | Asp 110 | Val | Ile |
| Ala | Val | Pro 115 | Arg | Val | Asp | Ile | His 120 | Ser | Met | Glu | Ala | Ser 125 | Thr | Gly | Ala |
| Ile | Asp 130 | Asp | Leu | Glu | Pro | Leu 135 | Pro | Leu | Leu | Tyr | Cys 140 | Gln | Val | Asp | Gln |
| Gln 145 | Arg | Ala | Val | Gly | Glu 150 | Val | Gly | Lys | Gly | Leu 155 | Glu | Gly | His | Glu | Phe 160 |
| Val | Val | Gly | Phe | Gly 165 | Gly | Pro | Gly | Glu | Ala 170 | Trp | Gly | Pro | Trp | Gly 175 | Gly |
| Leu | Gly | Ala | Gly 180 | Gly | Leu | Arg | Pro | Arg 185 | Ala | Ala | Trp | Leu | Ala 190 | Leu | Gly |
| Gln | Gly | Arg 195 | Val | Leu | Leu | Leu | Val 200 | His | Pro | Cys | Ser | Leu 205 | Phe | Tyr | Leu |
| Ser | Gly 210 | Pro | Gly | Trp | Phe | Val 215 | Ser | Gly | Ile | His | Ala 220 | Pro | Thr | Ile | Met |
| Val 225 | Gln | Gly | Leu | Pro | Val 230 | Pro | | | | | | | | | |

<210> 269

<211> 454

<212> PRT

<213> homo sapiens

<400> 269

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|-----------|-----------|-----------|------------|-----------|-----------|-----------|-----------|------------|-----------|-----------|-----------|-----------|------------|-----------|-----------|
| Gly 1 | Ala | Gly | Cys | Thr 5 | Ser | Pro | Gly | Leu | Trp 10 | Ala | Arg | Lys | Ala | Ala 15 | Ala |
| Arg | Cys | Leu | Pro 20 | Thr | Tyr | Pro | Ser | Arg 25 | Ala | Gln | Pro | Ser | Asn 30 | Val | Gly |
| Arg | Arg | Arg 35 | Arg | Arg | Arg | Pro | Gly 40 | Leu | Gly | Ala | Leu | Ala 45 | Ala | Gly | Val |
| Pro | Ala 50 | Met | Ala | Glu | Ser | Val 55 | Glu | Arg | Leu | Gln | Gln 60 | Arg | Val | Gln | Glu |
| Leu 65 | Glu | Arg | Glu | Leu | Ala 70 | Gln | Glu | Arg | Ser | Leu 75 | Gln | Val | Pro | Arg | Ser 80 |
| Gly | Asp | Gly | Gly | Gly 85 | Gly | Arg | Val | Arg | Ile 90 | Glu | Lys | Met | Ser | Ser 95 | Glu |
| Val | Val | Asp | Ser 100 | Asn | Pro | Tyr | Ser | Arg 105 | Leu | Met | Ala | Leu | Lys 110 | Arg | Met |
| Gly | Ile | Val | Ser | Asp | Tyr | Glu | Lys | Ile | Arg | Thr | Phe | Ala | Val | Ala | Ile |

[illegible]

450

<210> 270
 <211> 123
 <212> PRT
 <213> homo sapiens

<400> 270

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|-----------|-----------|------------|------------|-----------|-----------|-----------|------------|------------|-----------|-----------|-----------|-----------|------------|-----------|-----------|
| Lys 1 | Leu | Thr | Val | Pro 5 | Lys | Phe | Asn | Arg | Asn 10 | Phe | Asn | Thr | Phe | Cys 15 | Thr |
| Lys | Ile | Pro | Ala 20 | Thr | Thr | Pro | Ile | Val 25 | Val | Gly | Arg | Leu | Ala 30 | Ala | Gln |
| Thr | Pro | Ser 35 | Arg | Phe | Arg | Val | Phe 40 | Ser | Ser | Ile | Phe | Ala 45 | Ala | Thr | Thr |
| Ser | Gly 50 | Gly | Ala | His | Ala | Lys 55 | Gln | Ala | Asp | Ser | Pro 60 | Gly | Ile | Ile | Ser |
| Cys 65 | Ile | Cys | Pro | Glu | Thr 70 | Ala | Phe | Ser | Leu | Thr 75 | Pro | Asp | Ser | Ile | His 80 |
| Val | Cys | Pro | Ser | Ser 85 | Leu | Gln | Ala | Val | Phe 90 | Ile | Val | Ile | Arg | Ala 95 | Ser |
| Lys | Leu | Ser | Thr 100 | Gln | Leu | Arg | Thr | Arg 105 | Ser | Thr | Gly | Phe | Pro 110 | Ser | Ser |
| Asn | Pro | Pro 115 | Leu | Leu | Ile | Leu | Ser 120 | Met | Lys | Cys | | | | | |

<210> 271
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 <212> PRT
 <213> homo sapiens

<400> 271

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|-----------|-----------|------------|------------|-----------|-----------|-----------|------------|------------|-----------|-----------|-----------|------------|------------|-----------|-----------|
| Cys 1 | Ser | Ser | Glu | Tyr 5 | Val | Leu | Leu | Leu | Glu 10 | Leu | Tyr | Leu | Ile | Leu 15 | Leu |
| Asp | Glu | Val | Gly 20 | Arg | Lys | Val | Tyr | Ser 25 | Tyr | Trp | Leu | Val | Pro 30 | Pro | Cys |
| His | Asn | Gln 35 | Arg | Val | Ala | Thr | Tyr 40 | Gln | Cys | His | Ile | Leu 45 | Ser | Ala | Phe |
| Gln | Gln 50 | Ser | His | Tyr | Leu | Leu 55 | His | Gln | His | Leu | Leu 60 | Leu | Leu | Arg | Gln |
| Arg 65 | Tyr | Gly | Phe | Ser | His 70 | Ser | Arg | Leu | Gln | Phe 75 | Pro | Phe | Val | Ser | Met 80 |
| Pro | Ser | Ser | Gly | Cys 85 | Arg | Asp | Ser | Asn | Pro 90 | Pro | Pro | Leu | Ser | Ser 95 | Ser |
| Ser | Arg | Cys | Gly 100 | Pro | Gly | Arg | Pro | Leu 105 | Arg | Arg | Arg | Ser | Ser 110 | Gly | Pro |
| Ala | Asp | Ser 115 | Ser | Pro | Gly | Gln | Val 120 | Pro | Ala | Pro | Ala | Pro 125 | Gly | Pro | Ala |

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Ala | Gly | Ala | Pro | Gln | Thr | Pro | Pro | Trp | Leu | Gly | Leu | Arg | Pro | Pro |
| | 130 | | | | | 135 | | | | | 140 | | | | |
| Thr | Leu | Pro | Ala | Arg | Ala | Phe | Ala | Ala | Ala | Phe | Ala | Pro | Arg | Cys | Ser |
| 145 | | | | | 150 | | | | | 155 | | | | | 160 |
| Ala | Gly | Pro | Ala | Arg | Gly | Thr | Trp | Gly | Gly | Thr | Ser | Pro | Leu | Pro | Ser |
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<210> 272
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 <212> PRT
 <213> homo sapiens

<400> 272

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|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Ala | Arg | Gln | Ala | Trp | Thr | Gly | Ala | Lys | Gly | Ala | Gly | Ser | Leu | Thr |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Phe | Ser | Ser | Leu | Gln | Ser | Gly | His | Leu | Ala | Ser | Gly | Ser | Gln | Ser | Pro |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Glu | Ser | Thr | Lys | Ala | Pro | Gly | Thr | Pro | Pro | Thr | Pro | Ser | Tyr | Pro | Gly |
| | | 35 | | | | | 40 | | | | | 45 | | | |
| Thr | Pro | Ser | Arg | Gln | Leu | Leu | Trp | Gln | Trp | Val | Gln | Pro | Arg | Pro | Ala |
| | 50 | | | | | 55 | | | | | 60 | | | | |
| Leu | Pro | Ala | Ser | Ser | Pro | Cys | Ser | Arg | His | Gln | Leu | Tyr | Leu | Pro | Arg |
| 65 | | | | | 70 | | | | | 75 | | | | | 80 |
| Gln | Ala | Met | Ser | Trp | Leu | Leu | Ser | Pro | Ala | Pro | Ser | Val | Pro | Leu | Asp |
| | | | | 85 | | | | | 90 | | | | | 95 | |
| Phe | Ser | Gly | Ala | Ser | Pro | Val | Trp | Ala | Thr | Leu | Cys | Phe | Pro | His | Pro |
| | | | 100 | | | | | 105 | | | | | 110 | | |
| Arg | Leu | Pro | His | Arg | | | | | | | | | | | |
| | | 115 | | | | | | | | | | | | | |

<210> 273
 <211> 86
 <212> PRT
 <213> homo sapiens

<400> 273

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|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Pro | Ala | Leu | Pro | Pro | Pro | Ala | Gly | Asn | Val | Leu | Ala | Ser | Gln | Pro |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Ser | Thr | Ile | Cys | Ser | Pro | Arg | Leu | Leu | Arg | Gly | Gln | Pro | Ser | Leu | Gly |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| His | Pro | Leu | Phe | Pro | Ser | Ser | Ser | Ala | Pro | Thr | Gln | Val | Thr | Asp | Pro |
| | | 35 | | | | | 40 | | | | | 45 | | | |
| Ala | Asp | Ser | Phe | Ser | Leu | Gly | Lys | Val | Gly | Cys | Cys | Leu | Thr | Ser | Pro |
| | 50 | | | | | 55 | | | | | 60 | | | | |
| Ser | Ser | Pro | Pro | Pro | Ile | His | Thr | His | Arg | His | Pro | Pro | Thr | Pro | Gly |
| 65 | | | | | 70 | | | | | 75 | | | | | 80 |

Arg Leu Val Ser His Met
85

<210> 274
<211> 177
<212> PRT
<213> homo sapiens

<400> 274

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| Glu 1 | Ala | Arg | Thr | Leu 5 | Pro | Ala | Gly | Gly | Gly 10 | Arg | Ala | Gly | Ala | Tyr 15 | Cys |
| Arg | Glu | Arg | Arg 20 | Leu | Ala | Val | Leu | Ala 25 | Trp | Ala | Gly | Pro | Thr 30 | Ala | Ile |
| Thr | Val | Ala 35 | Tyr | Leu | Gly | Ser | Leu 40 | Gly | Arg | Met | Glu | Trp 45 | Val | Gly | Cys |
| Gln | Gly 50 | Leu | Trp | Cys | Phe | Leu 55 | Val | Ile | Gly | Thr | Leu 60 | Met | Pro | Ser | Ala |
| His 65 | Phe | Ala | Lys | Lys | Lys 70 | Lys | Leu | Met | Thr | Leu 75 | Leu | Pro | Trp | Leu | Leu 80 |
| Ser | Met | Leu | Ala | Trp 85 | Pro | Pro | Arg | Val | Gly 90 | Gly | Thr | Ser | Pro | Leu 95 | Leu |
| Ala | Glu | Ala | Gly 100 | Glu | Gln | Val | Leu | Ser 105 | Tyr | Asp | Pro | Ile | His 110 | Gln | Ala |
| Gly | Val | Leu 115 | Ser | Pro | Ser | Gly | His 120 | His | Ser | Ser | Gln | His 125 | Gln | Gly | Pro |
| Val | Gly 130 | Leu | Gly | Gln | Gly | Ser 135 | Glu | Lys | Gly | Trp | Gln 140 | Glu | Val | Pro | Arg |
| Ser 145 | Ser | Gln | Pro | Gly | Arg 150 | Gly | Thr | Asn | Ala | Leu 155 | Asn | Thr | Ser | Lys | Leu 160 |
| Arg | Asp | Pro | Lys | Val 165 | Ser | Thr | Pro | Gly | Ser 170 | Gly | Leu | Pro | Pro | His 175 | Arg |

His

<210> 275
<211> 71
<212> PRT
<213> homo sapiens

<400> 275

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| Gln 1 | Phe | Pro | Gly | Pro 5 | Ser | Val | Pro | Glu | Gln 10 | Ser | Thr | Ser | Val | Ser 15 | Val |
| Thr | Thr | Ser | Cys 20 | Leu | Phe | Pro | Ser | Leu 25 | His | Leu | Leu | Gln | Phe 30 | Ile | Tyr |
| Met | Leu | Leu 35 | Leu | Leu | Val | His | Phe 40 | Cys | Leu | Pro | Tyr | Gln 45 | Ala | Val | Asn |
| Glu | Gly 50 | Arg | Asn | Leu | Val | Cys 55 | Phe | Ile | His | His | His 60 | Val | Pro | Ser | Ala |

Trp His Ile Val Gly Leu His
65 70

<210> 276
<211> 102
<212> PRT
<213> homo sapiens

<400> 276

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Phe | Phe | Phe | Phe | Phe | Phe | Phe | Phe | Phe | Phe | Phe | Phe | Phe | Cys | Leu | Ile |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Asn | Met | Ser | Ile | Tyr | Leu | Ala | Pro | Asp | Gly | Asn | Thr | Lys | Ser | Trp | Gln |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Trp | Glu | Trp | Lys | Gly | Ser | Leu | Ser | Gln | Ile | Leu | Pro | Tyr | Tyr | Val | Asp |
| | | 35 | | | | | 40 | | | | | 45 | | | |
| Pro | Lys | Ala | Gly | Leu | Gly | Ser | Lys | Ala | His | Lys | Pro | Pro | Lys | Gln | Ile |
| | 50 | | | | | 55 | | | | | 60 | | | | |
| Phe | Ile | Glu | His | Leu | Asp | Tyr | Tyr | Arg | Pro | Ser | Ile | Leu | Leu | Gly | Thr |
| 65 | | | | | 70 | | | | | 75 | | | | | 80 |
| Met | Gly | Asp | Val | Lys | Glu | Val | Ile | Ser | His | Met | Ile | Cys | Leu | Gln | Gly |
| | | | | 85 | | | | | 90 | | | | | 95 | |
| Ala | Lys | Asn | Ala | Ser | Gly | | | | | | | | | | |
| | | | 100 | | | | | | | | | | | | |

<210> 277
<211> 65
<212> PRT
<213> homo sapiens

<400> 277

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gly | Val | Ile | Glu | Ser | Arg | Arg | Val | Leu | Ser | Arg | Gly | Val | Ile | Arg | Phe |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Ile | Phe | Lys | Gln | Pro | Asn | Pro | Gly | Arg | Cys | Gly | Pro | Ile | Leu | Ser | Ala |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Leu | Lys | Lys | Ile | Pro | Phe | Pro | Tyr | Leu | Pro | Ala | Ser | Ile | Met | Ser | Val |
| | | 35 | | | | | 40 | | | | | 45 | | | |
| Glu | Glu | Ser | Asn | Cys | Gly | Ser | Phe | Glu | Gly | Asp | Gly | Pro | Phe | Phe | Pro |
| | 50 | | | | | 55 | | | | | 60 | | | | |
| Val | | | | | | | | | | | | | | | |
| 65 | | | | | | | | | | | | | | | |

<210> 278
<211> 65
<212> PRT
<213> homo sapiens

<400> 278

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Phe | Phe | Phe | Phe | Phe | Phe | Phe | Phe | Phe | Phe | Phe | Phe | Leu | Phe | Asn | Lys |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |

| | | | | | | | | | | | | | | | |
|-----------|-----------|-----------|-----------|-----|-----|-----------|-----------|-----------|-----|-----|-----------|-----------|-----------|-----|-----|
| Tyr | Glu | His | Leu 20 | Phe | Gly | Thr | Arg | Trp 25 | Gln | Tyr | Lys | Ile | Leu 30 | Ala | Val |
| Gly | Val | Glu 35 | Arg | Phe | Ser | Leu | Ser 40 | Asn | Thr | Ser | Ile | Leu 45 | Cys | Arg | Pro |
| Lys | Gly 50 | Arg | Thr | Trp | Gln | Gln 55 | Gly | Ser | Gln | Thr | Thr 60 | Gln | Thr | Asn | Ile |
| Tyr 65 | | | | | | | | | | | | | | | |

<210> 279

<211> 489

<212> PRT

<213> homo sapiens

<400> 279

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| Leu 1 | Ala | Asp | Ser | Phe 5 | Pro | Gly | Ser | Ser | Pro 10 | Tyr | Glu | Gly | Tyr | Asn 15 | Tyr |
| Gly | Ser | Phe | Glu 20 | Asn | Val | Ser | Gly | Ser 25 | Thr | Asp | Gly | Leu | Val 30 | Asp | Ser |
| Ala | Gly | Thr 35 | Gly | Asp | Leu | Ser | Asp 40 | Gly | Tyr | Gln | Gly | Arg 45 | Ser | Phe | Glu |
| Pro | Val 50 | Gly | Thr | Arg | Pro | Arg 55 | Val | Asp | Ser | Met | Ser 60 | Ser | Val | Glu | Glu |
| Asp 65 | Asp | Tyr | Asp | Thr | Leu 70 | Thr | Asp | Ile | Asp | Ser 75 | Asp | Lys | Asn | Val | Ile 80 |
| Arg | Thr | Lys | Gln | Tyr 85 | Leu | Tyr | Val | Ala | Asp 90 | Leu | Ala | Arg | Lys | Asp 95 | Lys |
| Arg | Val | Leu | Arg 100 | Lys | Lys | Tyr | Gln | Ile 105 | Tyr | Phe | Trp | Asn | Ile 110 | Ala | Thr |
| Ile | Ala | Val 115 | Phe | Tyr | Ala | Leu | Pro 120 | Val | Val | Gln | Leu | Val 125 | Ile | Thr | Tyr |
| Gln | Thr 130 | Val | Val | Asn | Val | Thr 135 | Gly | Asn | Gln | Asp | Ile 140 | Cys | Tyr | Tyr | Asn |
| Phe 145 | Leu | Cys | Ala | His | Pro 150 | Leu | Gly | Asn | Leu | Ser 155 | Ala | Phe | Asn | Asn | Ile 160 |
| Leu | Ser | Asn | Leu | Gly 165 | Tyr | Ile | Leu | Leu | Gly 170 | Leu | Leu | Phe | Leu | Leu 175 | Ile |
| Ile | Leu | Gln | Arg 180 | Glu | Ile | Asn | His | Asn 185 | Arg | Ala | Leu | Leu | Arg 190 | Asn | Asp |
| Leu | Cys | Ala 195 | Leu | Glu | Cys | Gly | Ile 200 | Pro | Lys | His | Phe | Gly 205 | Leu | Phe | Tyr |
| Ala | Met 210 | Gly | Thr | Ala | Leu | Met 215 | Met | Glu | Gly | Leu | Leu 220 | Ser | Ala | Cys | Asp |
| His | Val | Cys | Pro | Asn | Tyr | Thr | Asn | Phe | Gln | Phe | Asp | Thr | Ser | Phe | Met |

| 225 | | | | | 230 | | | | | 235 | | | | | 240 | | |
|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|--|--|
| Tyr | Met | Ile | Ala | Gly 245 | Leu | Cys | Met | Leu | Lys 250 | Leu | Tyr | Gln | Lys | Arg 255 | His | | |
| Pro | Asp | Ile | Asn 260 | Ala | Ser | Ala | Tyr | Ser 265 | Ala | Tyr | Ala | Cys | Leu 270 | Ala | Ile | | |
| Val | Ile | Phe 275 | Phe | Ser | Val | Leu | Gly 280 | Val | Val | Phe | Gly | Lys 285 | Gly | Asn | Thr | | |
| Ala | Phe 290 | Trp | Ile | Val | Phe | Ser 295 | Ile | Ile | His | Ile | Ile 300 | Ala | Thr | Leu | Leu | | |
| Leu 305 | Ser | Thr | Gln | Leu | Tyr 310 | Tyr | Met | Gly | Arg | Trp 315 | Lys | Leu | Asp | Ser | Gly 320 | | |
| Ile | Phe | Arg | Arg | Ile 325 | Leu | His | Val | Leu | Tyr 330 | Thr | Asp | Cys | Ile | Arg 335 | Gln | | |
| Cys | Ser | Gly | Pro 340 | Leu | Tyr | Val | Asp | Arg 345 | Met | Val | Leu | Leu | Val 350 | Met | Gly | | |
| Asn | Val | Ile 355 | Asn | Trp | Ser | Leu | Ala 360 | Ala | Tyr | Gly | Leu | Ile 365 | Met | Arg | Pro | | |
| Asn | Asp 370 | Phe | Ala | Ser | Tyr | Leu 375 | Leu | Ala | Ile | Gly | Ile 380 | Cys | Asn | Leu | Leu | | |
| Leu 385 | Tyr | Phe | Ala | Phe | Tyr 390 | Ile | Ile | Met | Lys | Leu 395 | Arg | Ser | Gly | Glu | Arg 400 | | |
| Ile | Lys | Leu | Ile | Pro 405 | Leu | Leu | Cys | Ile | Val 410 | Cys | Thr | Ser | Val | Val 415 | Trp | | |
| Gly | Phe | Ala | Leu 420 | Phe | Phe | Phe | Phe | Gln 425 | Gly | Leu | Ser | Thr | Trp 430 | Gln | Lys | | |
| Thr | Pro | Ala 435 | Glu | Ser | Arg | Glu | His 440 | Asn | Arg | Asp | Cys | Ile 445 | Leu | Leu | Asp | | |
| Phe | Phe 450 | Asp | Asp | His | Asp | Ile 455 | Trp | His | Phe | Leu | Ser 460 | Ser | Ile | Ala | Met | | |
| Phe 465 | Gly | Ser | Phe | Leu | Val 470 | Leu | Leu | Thr | Leu | Asp 475 | Asp | Asp | Leu | Asp | Thr 480 | | |
| Val | Gln | Arg | Asp | Lys 485 | Ile | Tyr | Val | Phe | | | | | | | | | |

<210> 280

<211> 182

<212> PRT

<213> homo sapiens

<400> 280

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| Ala 1 | Pro | Leu | Cys | His 5 | Arg | Pro | Val | Thr | Leu 10 | Ser | Cys | Cys | Gly | Asp 15 | Glu |
| Ser | Gln | His | Arg 20 | Cys | Pro | Ala | Leu | Asp 25 | Gly | Ser | Arg | Thr | Ala 30 | Arg | Ser |

| | | | | | | | | | | | | | | | |
|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Ser | Leu | Gly 35 | Leu | Ala | Trp | Asp | Ser 40 | His | Gly | Val | Ala | Trp 45 | Asn | Leu | Ala |
| Ala | Ala 50 | Leu | Cys | Arg | Gly | Ala 55 | Gly | Leu | Leu | Pro | Trp 60 | Asp | Pro | Gln | Met |
| Leu 65 | Ala | Lys | Leu | Leu | Leu 70 | Ser | Ser | Gln | Cys | Trp 75 | Gly | Leu | Pro | Trp | Ala 80 |
| Pro | Val | Leu | Trp | Leu 85 | Ser | Ile | Cys | Pro | Phe 90 | Ala | Arg | Gly | Arg | Met 95 | Glu |
| Gly | Thr | Pro | Ser 100 | Pro | Phe | His | Ala | Leu 105 | His | Phe | Ala | Arg | Pro 110 | Pro | Pro |
| His | Asn | Ala 115 | Pro | Ala | Trp | Asp | Leu 120 | Arg | Pro | Leu | Phe | Pro 125 | Pro | Ile | Leu |
| Pro | Leu 130 | Gln | Gly | Leu | Val | Trp 135 | Gly | Leu | Asn | Leu | Cys 140 | Pro | Val | Ser | Gly |
| Pro 145 | Gln | Phe | Ser | Leu | Gly 150 | Cys | Pro | Trp | Leu | Pro 155 | Ser | Leu | Pro | Ile | Pro 160 |
| Val | Ser | Gln | Asp | Gly 165 | Trp | Gly | Tyr | Glu | Ile 170 | Leu | Gly | Val | Gly | Gln 175 | Leu |
| Val | Pro | Asp | Phe 180 | Trp | Cys | | | | | | | | | | |

<210> 281

<211> 536

<212> PRT

<213> homo sapiens

<400> 281

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| Ala 1 | Arg | Pro | Gly | Cys 5 | Pro | Ala | Ala | Ile | Gln 10 | Cys | Trp | Ala | Ala | Val 15 | Leu |
| Gly | Leu | Ile | Pro 20 | Thr | Ala | Arg | Gln | Ser 25 | Asp | Arg | Ser | Met | Thr 30 | Gln | Arg |
| Ser | Ser | Gly 35 | Pro | Leu | Glu | Val | Lys 40 | Arg | Arg | Ala | Gln | Leu 45 | Leu | Leu | Glu |
| Asp | Ile 50 | Asp | Leu | Val | Pro | Leu 55 | His | Ser | Ile | Gln | Val 60 | Val | Ile | Gln | Cys |
| Gln 65 | Gln | His | Gln | Glu | Gly 70 | Pro | Glu | His | Gly | Asp 75 | Gly | Gly | Glu | Glu | Val 80 |
| Pro | Asp | Val | Val | Val 85 | Val | Lys | Glu | Val | Glu 90 | Glu | Asp | Ala | Val | Pro 95 | Val |
| Val | Leu | Pro | Arg 100 | Leu | Cys | Arg | Gly | Phe 105 | Leu | Pro | Gly | Ala | Glu 110 | Ser | Leu |
| Glu | Glu | Glu 115 | Glu | Glu | Arg | Glu | Ala 120 | Pro | Asp | His | Gly | Gly 125 | Ala | Asn | Asp |
| Ala | Glu 130 | Gln | Gly | Asp | Glu | Leu 135 | Asp | Pro | Leu | Pro | Thr 140 | Pro | Glu | Leu | His |

| | | | | | | | | | | | | | | | |
|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Asp 145 | Asp | Val | Glu | Gly | Glu 150 | Val | Lys | Glu | Gln | Val 155 | Ala | Asp | Ala | Asn | Gly 160 |
| Gln | Gln | Val | Gly | Ser 165 | Glu | Ile | Ile | Gly | Ala 170 | His | Asp | Lys | Pro | Ile 175 | Gly |
| Ser | Gln | Arg | Pro 180 | Val | Asp | Asp | Val | Ala 185 | His | Asp | Gln | Gln | His 190 | His | Ala |
| Val | His | Val 195 | Glu | Arg | Pro | Ala | Ala 200 | Leu | Pro | Asp | Ala | Val 205 | Cys | Val | Glu |
| His | Val 210 | Glu | Asp | Ala | Ala | Glu 215 | Asp | Pro | Arg | Val | Gln 220 | Phe | Pro | Pro | Ala |
| His 225 | Val | Ile | Glu | Leu | Arg 230 | Ala | Glu | Glu | Gln | Gly 235 | Gly | Asp | Asp | Val | Asn 240 |
| Asp | Gly | Glu | Asp | Asp 245 | Pro | Glu | Arg | Arg | Val 250 | Pro | Phe | Ala | Lys | Asp 255 | His |
| Ala | Gln | His | Arg 260 | Glu | Glu | Asp | Asp | Asn 265 | Gly | Gln | Ala | Gly | Val 270 | Gly | Thr |
| Val | Gly | Ala 275 | Gly | Val | Asp | Val | Arg 280 | Val | Pro | Leu | Leu | Val 285 | Glu | Leu | Gln |
| His | Ala 290 | Glu | Ser | Gly | Asp | His 295 | Val | His | Glu | Arg | Cys 300 | Val | Lys | Leu | Glu |
| Ile 305 | Gly | Ile | Val | Gly | Ala 310 | His | Met | Ile | Ala | Ser 315 | Thr | Glu | Gln | Pro | Leu 320 |
| His | His | Gln | Gly | Cys 325 | Ala | His | Gly | Val | Glu 330 | Lys | Pro | Lys | Val | Phe 335 | Gly |
| Asp | Pro | Thr | Phe 340 | Gln | Gly | Thr | Glu | Val 345 | Ile | Ala | Gln | Gln | Gly 350 | Pro | Val |
| Val | Val | Asp 355 | Leu | Pro | Leu | Gln | Asp 360 | Asp | Glu | Gln | Glu | Lys 365 | Gln | Pro | Gln |
| Gln | Asp 370 | Val | Pro | Gln | Val | Ala 375 | Glu | Asp | Val | Val | Glu 380 | Gly | Ala | Glu | Ile |
| Ala 385 | Gln | Trp | Val | Gly | Ala 390 | Glu | Glu | Val | Val | Val 395 | Ala | Asp | Val | Leu | Ile 400 |
| Pro | Cys | Asp | Ile | His 405 | His | Arg | Leu | Val | Gly 410 | Asp | His | Gln | Leu | His 415 | His |
| Arg | Lys | Gly | Ile 420 | Glu | Asp | Ser | Asn | Gly 425 | Gly | Asn | Val | Pro | Glu 430 | Val | Asp |
| Leu | Val | Leu 435 | Phe | Pro | Gln | Asn | Thr 440 | Leu | Val | Leu | Pro | Cys 445 | Gln | Val | Ser |
| His | Ile 450 | Glu | Val | Leu | Leu | Gly 455 | Ala | Asn | Asp | Ile | Leu 460 | Val | Gly | Ile | Asp |
| Val 465 | Gly | Gln | Cys | Val | Val 470 | Val | Ile | Leu | Leu | His 475 | Arg | Ala | His | Gly | Val 480 |

| | | | | | | | | | | | | | | | |
|-----|------------|------------|------------|------------|-----|------------|------------|------------|------------|-----|-----|------------|------------|------------|-----|
| His | Ser | Gly | Pro | Ser 485 | Thr | Tyr | Arg | Phe | Lys 490 | Gly | Ala | Ala | Leu | Val 495 | Thr |
| Val | Arg | Glu | Val 500 | Pro | Ser | Ala | Ser | Ala 505 | Val | Asn | Gln | Thr | Ile 510 | Gly | Arg |
| Ser | Arg | Asn 515 | Ile | Leu | Lys | Gly | Ala 520 | Ile | Val | Val | Thr | Leu 525 | Ile | Arg | Gly |
| Thr | Ala 530 | Arg | Lys | Arg | Ile | Ser 535 | Gln | | | | | | | | |

<210> 282

<211> 551

<212> PRT

<213> homo sapiens

<400> 282

| | | | | | | | | | | | | | | | |
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| Pro 1 | Leu | Ser | Ser | Pro 5 | Ser | Cys | Cys | Arg | Tyr 10 | Arg | Arg | Cys | Cys | Arg 15 | Arg |
| Leu | Arg | Pro | Pro 20 | Leu | Arg | Ser | Val | Val 25 | Gln | Pro | Gly | Pro | Arg 30 | Thr | Met |
| Ser | Leu | Ser 35 | Arg | Ser | Glu | Glu | Met 40 | His | Arg | Leu | Thr | Glu 45 | Asn | Val | Tyr |
| Lys | Thr 50 | Ile | Met | Glu | Gln | Phe 55 | Asn | Pro | Ser | Leu | Arg 60 | Asn | Phe | Ile | Ala |
| Met 65 | Gly | Lys | Asn | Tyr | Glu 70 | Lys | Ala | Leu | Ala | Gly 75 | Val | Thr | Tyr | Ala | Ala 80 |
| Lys | Gly | Tyr | Phe | Asp 85 | Ala | Leu | Val | Lys | Met 90 | Gly | Glu | Leu | Ala | Ser 95 | Glu |
| Ser | Gln | Gly | Ser 100 | Lys | Glu | Leu | Gly | Asp 105 | Val | Leu | Phe | Gln | Met 110 | Ala | Glu |
| Val | His | Arg 115 | Gln | Ile | Gln | Asn | Gln 120 | Leu | Glu | Glu | Met | Leu 125 | Lys | Ser | Phe |
| His | Asn 130 | Glu | Leu | Leu | Thr | Gln 135 | Leu | Glu | Gln | Lys | Val 140 | Glu | Leu | Asp | Ser |
| Arg 145 | Tyr | Leu | Ser | Ala | Ala 150 | Leu | Lys | Lys | Tyr | Gln 155 | Thr | Glu | Gln | Arg | Ser 160 |
| Lys | Gly | Asp | Ala | Leu 165 | Asp | Lys | Cys | Gln | Ala 170 | Glu | Leu | Lys | Lys | Leu 175 | Arg |
| Lys | Lys | Ser | Gln 180 | Gly | Ser | Lys | Asn | Pro 185 | Gln | Lys | Tyr | Ser | Asp 190 | Lys | Glu |
| Leu | Gln | Tyr 195 | Ile | Asp | Ala | Ile | Ser 200 | Asn | Lys | Gln | Gly | Glu 205 | Leu | Glu | Asn |
| Tyr | Val 210 | Ser | Asp | Gly | Tyr | Lys 215 | Thr | Ala | Leu | Thr | Glu 220 | Glu | Arg | Arg | Arg |
| Phe | Cys | Phe | Leu | Val | Glu | Lys | Gln | Cys | Ala | Val | Ala | Lys | Asn | Ser | Ala |

| 225 | | | | | 230 | | | | | 235 | | | | | 240 | | |
|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|--|--|
| Ala | Tyr | His | Ser | Lys 245 | Gly | Lys | Glu | Leu | Leu 250 | Ala | Gln | Lys | Leu | Pro 255 | Leu | | |
| Trp | Gln | Gln | Ala 260 | Cys | Ala | Asp | Pro | Ser 265 | Lys | Ile | Pro | Glu | Arg 270 | Ala | Val | | |
| Gln | Leu | Met 275 | Gln | Gln | Val | Ala | Ser 280 | Asn | Gly | Ala | Thr | Leu 285 | Pro | Ser | Ala | | |
| Leu | Ser 290 | Ala | Ser | Lys | Ser | Asn 295 | Leu | Val | Ile | Ser | Asp 300 | Pro | Ile | Pro | Gly | | |
| Ala 305 | Lys | Pro | Leu | Pro | Val 310 | Pro | Pro | Glu | Leu | Ala 315 | Pro | Phe | Val | Gly | Arg 320 | | |
| Met | Ser | Ala | Gln | Glu 325 | Ser | Thr | Pro | Ile | Met 330 | Asn | Gly | Val | Thr | Gly 335 | Pro | | |
| Asp | Gly | Glu | Asp 340 | Tyr | Ser | Pro | Trp | Ala 345 | Asp | Arg | Lys | Ala 350 | Ala | Gln | Pro | | |
| Lys | Ser | Leu 355 | Ser | Pro | Pro | Gln | Ser 360 | Gln | Ser | Lys | Leu | Ser 365 | Asp | Ser | Tyr | | |
| Ser | Asn 370 | Thr | Leu | Pro | Val | Arg 375 | Lys | Ser | Val | Thr | Pro 380 | Lys | Asn | Ser | Tyr | | |
| Ala 385 | Thr | Thr | Glu | Asn | Lys 390 | Thr | Leu | Pro | Arg | Ser 395 | Ser | Ser | Met | Ala | Ala 400 | | |
| Gly | Leu | Glu | Arg | Asn 405 | Gly | Arg | Met | Arg | Val 410 | Lys | Ala | Ile | Phe | Ser 415 | His | | |
| Ala | Ala | Gly | Asp 420 | Asn | Ser | Thr | Leu | Leu 425 | Ser | Phe | Lys | Glu | Gly 430 | Asp | Leu | | |
| Ile | Thr | Leu 435 | Leu | Val | Pro | Glu | Ala 440 | Arg | Asp | Gly | Trp | His 445 | Tyr | Gly | Glu | | |
| Ser | Glu 450 | Lys | Thr | Lys | Met | Arg 455 | Gly | Trp | Phe | Pro | Phe 460 | Ser | Tyr | Thr | Arg | | |
| Val 465 | Leu | Asp | Ser | Asp | Gly 470 | Ser | Asp | Arg | Leu | His 475 | Met | Ser | Leu | Gln | Gln 480 | | |
| Gly | Lys | Ser | Ser | Ser 485 | Thr | Gly | Asn | Leu | Leu 490 | Asp | Lys | Asp | Asp | Leu 495 | Ala | | |
| Ile | Pro | Pro | Pro 500 | Asp | Tyr | Gly | Ala | Ala 505 | Ser | Arg | Ala | Phe | Pro 510 | Ala | Gln | | |
| Thr | Ala | Ser 515 | Gly | Phe | Lys | Gln | Arg 520 | Pro | Tyr | Ser | Val | Ala 525 | Val | Pro | Ala | | |
| Phe | Ser 530 | Gln | Gly | Leu | Asp | Asp 535 | Tyr | Gly | Ala | Arg | Ser 540 | Met | Ser | Ser | Ala | | |
| Asp 545 | Val | Glu | Val | Ala | Arg 550 | Phe | | | | | | | | | | | |

<211> 185
 <212> PRT
 <213> homo sapiens

<400> 283

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|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Ala 1 | Gly | Glu | Ala | Ala 5 | Gly | Gln | Pro | Gly | Ser 10 | Pro | Pro | Ser | His | Gln 15 | Leu |
| Ala | Lys | Cys | Pro 20 | Pro | Leu | Thr | Gln | Gly 25 | Tyr | Pro | Arg | Leu | His 30 | Gly | His |
| Val | Thr | Arg 35 | Gly | Val | Tyr | Pro | Gln 40 | Glu | Ala | Ala | Pro | Gln 45 | Pro | Trp | Ala |
| Ala | Gln 50 | Pro | Leu | Gly | Leu | Ala 55 | Leu | Gln | Gly | Pro | Ala 60 | Pro | His | Ser | Ala |
| Arg 65 | Pro | Cys | Leu | Glu | Gln 70 | Leu | Gly | Ser | Ser | Pro 75 | Gly | Gln | Thr | Gln | Val 80 |
| Gly | Gln | Asp | Gln | Ala 85 | Ala | Gly | Ala | Trp | Met 90 | Phe | Ser | Thr | Gln | Glu 95 | Arg |
| Thr | Asp | Asp | Asp 100 | Arg | Thr | Gly | Tyr | Met 105 | Gly | Arg | Ala | Gly | Glu 110 | Ala | Thr |
| Arg | Trp | Ala 115 | Ala | Leu | Gln | Met | Trp 120 | Pro | Ser | Ala | Glu | Glu 125 | Gly | Gly | Arg |
| Pro | Val 130 | Val | Gly | His | Cys | Arg 135 | Leu | Gln | Leu | Asp | Val 140 | Gly | Lys | Gly | Ile |
| Leu 145 | Thr | Leu | Val | Arg | Arg 150 | Leu | Arg | Ile | Trp | Pro 155 | Leu | Pro | His | Arg | Arg 160 |
| Cys | Ser | Trp | Thr | Ala 165 | Leu | His | Ser | His | Pro 170 | Gly | Pro | Gly | Arg | Arg 175 | Arg |
| Ala | Arg | Pro | His 180 | Cys | Arg | Ala | Ser | Ala 185 | | | | | | | |

<210> 284
 <211> 518
 <212> PRT
 <213> homo sapiens

<400> 284

| | | | | | | | | | | | | | | | |
|-----------|-----------|-----------|-----------|----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Ser 1 | Gly | Gly | Ser | Glu 5 | Ser | Gly | His | Phe | His 10 | Ile | Gly | Ala | Ala | His 15 | Gly |
| Pro | Arg | Ser | Ile 20 | Val | Ile | Gln | Ala | Leu 25 | Gly | Glu | Gly | Gly | His 30 | Gly | His |
| Thr | Val | Gly 35 | Pro | Leu | Leu | Glu | Ala 40 | Ala | Gly | Arg | Leu | Gly 45 | Gly | Glu | Gly |
| Pro | Gly 50 | Gly | Gly | Ala | Val | Ile 55 | Gly | Gly | Trp | Asp | Gly 60 | Gln | Val | Val | Leu |
| Val 65 | Gln | Glu | Val | Ala | Arg 70 | Ala | Ala | Ala | Leu | Pro 75 | Leu | Leu | Gln | Ala | His 80 |

| | | | | | | | | | | | | | | | |
|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Val | Gln | Pro | Val | Thr 85 | Ala | Ile | Ala | Val | Gln 90 | Asp | Pro | Gly | Val | Gly 95 | Glu |
| Gly | Lys | Pro | Ala 100 | Pro | His | Leu | Gly | Leu 105 | Leu | Thr | Leu | Ser | Val 110 | Val | Pro |
| Ala | Ile | Ala 115 | Gly | Leu | Arg | His | Gln 120 | Gln | Gly | Asn | Glu | Val 125 | Thr | Leu | Leu |
| Glu | Ala 130 | Gln | Glu | Gly | Ala | Val 135 | Val | Pro | Ser | Ser | Val 140 | Gly | Glu | Asp | Gly |
| Leu 145 | His | Pro | His | Thr | Ala 150 | Ile | Ala | Leu | Gln | Ala 155 | Gly | Cys | His | Gly | Ala 160 |
| Arg | Ala | Arg | Gln | Ser 165 | Leu | Val | Leu | Gly | Gly 170 | Gly | Ile | Ala | Val | Phe 175 | Trp |
| Gly | His | Ala | Leu 180 | Ala | His | Gly | Glu | Cys 185 | Val | Gly | Val | Gly | Val 190 | Ala | Glu |
| Leu | Ala | Leu 195 | Arg | Leu | Arg | Arg | Arg 200 | Gln | Gly | Phe | Gly | Leu 205 | Gly | Ser | Leu |
| Ala | Val 210 | Ser | Pro | Arg | Ala | Val 215 | Val | Leu | Ala | Ile | Arg 220 | Ala | Cys | Asp | Ala |
| Val 225 | His | Asp | Gly | Cys | Ala 230 | Leu | Leu | Gly | Arg | His 235 | Pro | Pro | His | Glu | Arg 240 |
| Cys | Gln | Leu | Gly | Gly 245 | His | Arg | Gln | Gly | Leu 250 | Gly | Pro | Arg | Asn | Gly 255 | Val |
| Gly | Asn | Asp | Gln 260 | Val | Gly | Leu | Gly | Gly 265 | Arg | Gln | Gly | Ala | Gly 270 | Glu | Gly |
| Gly | Ala | Val 275 | Ala | Gly | His | Leu | Leu 280 | His | Glu | Leu | His | Arg 285 | Ala | Leu | Arg |
| Asp | Leu 290 | Ala | Gly | Val | Gly | Thr 295 | Gly | Leu | Leu | Pro | Gln 300 | Arg | Gln | Leu | Leu |
| Arg 305 | Gln | Gln | Leu | Leu | Ala 310 | Leu | Gly | Val | Val | Gly 315 | Arg | Gly | Val | Leu | Gly 320 |
| His | Gly | Ala | Leu | Leu 325 | Leu | His | Gln | Glu | Ala 330 | Glu | Ala | Pro | Ala | Leu 335 | Leu |
| Cys | Gln | Cys | Gly 340 | Leu | Val | Ala | Val | Gly 345 | His | Val | Ile | Leu | Gln 350 | Leu | Ala |
| Leu | Leu | Val 355 | Ala | Asp | Gly | Val | Asp 360 | Val | Leu | Gln | Leu | Leu 365 | Val | Arg | Val |
| Leu | Leu 370 | Arg | Ile | Leu | Ala | Ala 375 | Leu | Ala | Leu | Leu | Pro 380 | Lys | Leu | Leu | Gln |
| Leu 385 | Ser | Leu | Thr | Leu | Val 390 | Gln | Gly | Val | Ala | Phe 395 | Ala | Pro | Leu | Leu | Ser 400 |
| Leu | Val | Phe | Leu | Gln 405 | Arg | Ser | Thr | Gln | Ile 410 | Pro | Gly | Val | Gln | Leu 415 | His |

| | | | | | | | | | | | | | | | |
|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Leu | Leu | Leu | Gln 420 | Leu | Arg | Lys | Gln | Leu 425 | Val | Val | Lys | Arg | Leu 430 | Gln | His |
| Phe | Phe | Gln 435 | Leu | Ile | Leu | Asp | Leu 440 | Pro | Val | Asp | Phe | Ser 445 | His | Leu | Glu |
| Glu | Asn 450 | Val | Ser | Glu | Phe | Phe 455 | Gly | Ala | Leu | Ala | Leu 460 | Ala | Gly | Gln | Leu |
| Pro 465 | His | Leu | His | Gln | Gly 470 | Val | Lys | Val | Ala | Phe 475 | Gly | Cys | Ile | Arg | His 480 |
| Thr | Cys | Gln | Cys | Leu 485 | Leu | Val | Ile | Leu | Pro 490 | His | Gly | Asp | Glu | Val 495 | Pro |
| Glu | Ala | Arg | Val 500 | Glu | Leu | Leu | His | Asp 505 | Gly | Leu | Ile | Asp | Ile 510 | Phe | Arg |
| Glu | Pro | Val 515 | His | Leu | Leu | | | | | | | | | | |

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| Val 1 | Arg | Glu | Ala | Ala 5 | Arg | Arg | Glu | Gln | Arg 10 | Tyr | Gln | Glu | Gln | Gly 15 | Gly |
| Glu | Ala | Ser | Pro 20 | Gln | Arg | Thr | Trp | Glu 25 | Gln | Gln | Gln | Glu | Val 30 | Val | Ser |
| Arg | Asn | Arg 35 | Asn | Glu | Gln | Glu | Ser 40 | Ala | Val | His | Pro | Arg 45 | Glu | Ile | Phe |
| Lys | Gln 50 | Lys | Glu | Arg | Ala | Met 55 | Ser | Thr | Thr | Ser | Ile 60 | Ser | Ser | Pro | Gln |
| Pro 65 | Gly | Lys | Leu | Arg | Ser 70 | Pro | Phe | Leu | Gln | Lys 75 | Gln | Leu | Thr | Gln | Pro 80 |
| Glu | Thr | His | Phe | Gly 85 | Arg | Glu | Pro | Ala | Ala 90 | Ala | Ile | Ser | Arg | Pro 95 | Arg |
| Ala | Asp | Leu | Pro 100 | Ala | Glu | Glu | Pro | Ala 105 | Pro | Ser | Thr | Pro | Pro 110 | Cys | Leu |
| Val | Gln | Ala 115 | Glu | Glu | Glu | Ala | Val 120 | Tyr | Glu | Glu | Pro | Pro 125 | Glu | Gln | Glu |
| Thr | Phe 130 | Tyr | Glu | Gln | Pro | Pro 135 | Leu | Val | Gln | Gln | Gln 140 | Gly | Ala | Gly | Ser |
| Glu 145 | His | Ile | Asp | His | His 150 | Ile | Gln | Gly | Gln | Gly 155 | Leu | Ser | Gly | Gln | Gly 160 |
| Leu | Cys | Ala | Arg | Ala 165 | Leu | Tyr | Asp | Tyr | Gln 170 | Ala | Ala | Asp | Asp | Thr 175 | Glu |
| Ile | Ser | Phe | Asp | Pro | Glu | Asn | Leu | Ile | Thr | Gly | Ile | Glu | Val | Ile | Asp |

| | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|
| | | | 180 | | | | | 185 | | | | | 190 | | | |
| Glu | Gly | Trp | Trp | Arg | Gly | Tyr | Gly | Pro | Asp | Gly | His | Phe | Gly | Met | Phe | |
| | | 195 | | | | | 200 | | | | | 205 | | | | |
| Pro | Ala | Asn | Tyr | Val | Glu | Leu | Ile | Glu | | | | | | | | |
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| 1 | | | | 5 | | | | | 10 | | | | | 15 | | |
| Phe | Ser | Phe | Ser | Leu | Ala | Ser | Lys | Gly | Trp | Trp | Pro | Pro | Leu | Phe | Arg | |
| | | | 20 | | | | | 25 | | | | | 30 | | | |
| Met | Thr | Leu | Gly | Asn | Ser | Glu | Arg | Arg | Glu | Leu | Phe | Leu | Ala | Glu | Phe | |
| | | 35 | | | | | 40 | | | | | 45 | | | | |
| Val | Thr | Lys | Val | Arg | Val | Asp | His | Gly | Gly | Leu | Ala | Ala | Gly | Asn | Leu | |
| | 50 | | | | | 55 | | | | | 60 | | | | | |
| Ser | Cys | Trp | Ser | Leu | Leu | Cys | Ala | Pro | His | Ser | Ile | Ser | Leu | Ser | Leu | |
| 65 | | | | | 70 | | | | | 75 | | | | | 80 | |
| Cys | Leu | Gly | Tyr | Gly | Lys | Trp | Gly | Cys | Arg | Trp | Pro | Ser | Ser | His | Pro | |
| | | | | 85 | | | | | 90 | | | | | 95 | | |
| Gly | Tyr | Ser | Lys | Thr | Ala | Asp | Thr | Thr | Cys | Ser | Ser | Thr | Arg | Leu | Thr | |
| | | | 100 | | | | | 105 | | | | | 110 | | | |
| Arg | Cys | Leu | Gln | Ala | Pro | Val | Cys | Ala | Ser | Thr | Asp | Ser | Asp | Phe | Arg | |
| | | 115 | | | | | 120 | | | | | 125 | | | | |
| Lys | Ser | Asn | Thr | Glu | Trp | Pro | Trp | Pro | Val | Val | Phe | Pro | Tyr | Phe | Leu | |
| | 130 | | | | | 135 | | | | | 140 | | | | | |
| Ser | Gln | Leu | Ile | Arg | Val | Ser | Glu | Glu | Gln | Ile | Cys | Phe | Trp | Thr | Lys | |
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| Lys | Lys | | | | | | | | | | | | | | | |

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<400> 287

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| 1 | | | | 5 | | | | | 10 | | | | | 15 | | |
| Asn | Ser | Gly | Lys | Val | Met | Tyr | Ala | Phe | Cys | Arg | Val | Lys | Asp | Pro | Asn | |
| | | | 20 | | | | | 25 | | | | | 30 | | | |
| Ser | Gly | Leu | Pro | Lys | Phe | Val | Leu | Ile | Asn | Trp | Thr | Gly | Glu | Gly | Val | |
| | | 35 | | | | | 40 | | | | | 45 | | | | |

| | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|
| Asn | Asp | Val | Arg | Lys | Gly | Ala | Cys | Ala | Ser | His | Val | Ser | Thr | Met | Ala | |
| | 50 | | | | | 55 | | | | | 60 | | | | | |
| Ser | Phe | Leu | Lys | Gly | Ala | His | Val | Thr | Ile | Asn | Ala | Arg | Ala | Glu | Glu | |
| 65 | | | | 70 | | | | | | 75 | | | | | 80 | |
| Asp | Val | Glu | Pro | Glu | Cys | Ile | Met | Glu | Lys | Val | Ala | Lys | Ala | Ser | Gly | |
| | | | | 85 | | | | | 90 | | | | | 95 | | |
| Ala | Asn | Tyr | Ser | Phe | His | Lys | Glu | Ser | Gly | Arg | Phe | Gln | Asp | Val | Gly | |
| | | | 100 | | | | | 105 | | | | | 110 | | | |
| Pro | Gln | Ala | Pro | Val | Gly | Ser | Val | Tyr | Gln | Lys | Thr | Asn | Ala | Val | Ser | |
| | | 115 | | | | | 120 | | | | | 125 | | | | |
| Glu | Ile | Lys | Arg | Val | Gly | Lys | Asp | Ser | Phe | Trp | Ala | Lys | Ala | Glu | Lys | |
| | 130 | | | | | 135 | | | | | 140 | | | | | |
| Glu | Glu | Glu | Asn | Arg | Arg | Leu | Glu | Glu | Lys | Arg | Arg | Ala | Glu | Glu | Ala | |
| 145 | | | | | 150 | | | | | 155 | | | | | 160 | |
| Gln | Arg | Gln | Trp | Ser | Arg | Ser | Ala | Gly | Ser | Val | Ser | Ala | | | | |
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| Glu | Lys | Cys | Gly | Gln | Tyr | Ile | Gln | Lys | Gly | Tyr | Ser | Lys | Leu | Lys | Ile | |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | | |
| Tyr | Asn | Cys | Glu | Leu | Glu | Asn | Val | Ala | Glu | Phe | Glu | Gly | Leu | Thr | Asp | |
| | | | 20 | | | | | 25 | | | | | 30 | | | |
| Phe | Ser | Asp | Thr | Phe | Lys | Leu | Tyr | Arg | Gly | Lys | Ser | Asp | Glu | Asn | Glu | |
| | | 35 | | | | | 40 | | | | | 45 | | | | |
| Asp | Pro | Ser | Val | Val | Gly | Glu | Phe | Lys | Gly | Ser | Phe | Arg | Ile | Tyr | Pro | |
| | 50 | | | | | 55 | | | | | 60 | | | | | |
| Leu | Pro | Asp | Asp | Pro | Ser | Val | Pro | Ala | Pro | Pro | Arg | Gln | Phe | Arg | Glu | |
| 65 | | | | | 70 | | | | | 75 | | | | | 80 | |
| Leu | Pro | Asp | Ser | Val | Pro | Gln | Glu | Cys | Thr | Val | Arg | Ile | Tyr | Ile | Val | |
| | | | | 85 | | | | | 90 | | | | | 95 | | |
| Arg | Gly | Leu | Glu | Leu | Gln | Pro | Gln | Asp | Asn | Asn | Gly | Leu | Cys | Asp | Pro | |
| | | | 100 | | | | | 105 | | | | | 110 | | | |
| Tyr | Ile | Lys | Ile | Thr | Leu | Gly | Lys | Lys | Val | Ile | Glu | Asp | Arg | Asp | His | |
| | | 115 | | | | 120 | | | | | | 125 | | | | |
| Tyr | Ile | Pro | Asn | Thr | Leu | Asn | Pro | Val | Phe | Gly | Arg | Met | Tyr | Glu | Leu | |
| | 130 | | | | | 135 | | | | | 140 | | | | | |
| Ser | Cys | Tyr | Leu | Pro | Gln | Glu | Lys | Asp | Leu | Lys | Ile | Ser | Val | Tyr | Asp | |
| 145 | | | | | 150 | | | | | 155 | | | | | 160 | |
| Tyr | Asp | Thr | Phe | Thr | Arg | Asp | Glu | Lys | Val | Gly | Glu | Thr | Ile | Ile | Asp | |
| | | | | 165 | | | | | 170 | | | | | 175 | | |

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Glu | Asn | Arg | Phe | Leu | Ser | Arg | Phe | Gly | Ser | His | Cys | Gly | Ile | Pro |
| | | | 180 | | | | | 185 | | | | | 190 | | |
| Glu | Glu | Tyr | Cys | Val | Ser | Gly | Val | Asn | Thr | Trp | Arg | Asp | Gln | Leu | Arg |
| | | 195 | | | | | 200 | | | | | 205 | | | |
| Pro | Thr | Gln | Leu | Leu | Gln | Asn | Val | Ala | Arg | Phe | Lys | Gly | Phe | Pro | Gln |
| | 210 | | | | | 215 | | | | | 220 | | | | |
| Pro | Ile | Leu | Ser | Glu | Asp | Gly | Ser | Arg | Ile | Arg | Tyr | Gly | Gly | Arg | Asp |
| 225 | | | | | 230 | | | | | 235 | | | | | 240 |
| Tyr | Ser | Leu | Asp | Glu | Phe | Glu | Ala | Asn | Lys | Ile | Leu | His | Gln | His | Leu |
| | | | | 245 | | | | | 250 | | | | | 255 | |
| Gly | Ala | Pro | Glu | Glu | Arg | Leu | Ala | Leu | His | Ile | Leu | Arg | Thr | Gln | Gly |
| | | | 260 | | | | | 265 | | | | | 270 | | |
| Leu | Val | Pro | Glu | His | Val | Glu | Thr | Arg | Thr | Leu | His | Ser | Thr | Phe | Gln |
| | | 275 | | | | | 280 | | | | | 285 | | | |
| Pro | Asn | Ile | Ser | Gln | Gly | Lys | Leu | Gln | Met | Trp | Val | Asp | Val | Phe | Pro |
| | 290 | | | | | 295 | | | | | 300 | | | | |
| Lys | Ser | Leu | Gly | Pro | Pro | Gly | Pro | Pro | Phe | Asn | Ile | Thr | Pro | Arg | Lys |
| 305 | | | | | 310 | | | | | 315 | | | | | 320 |
| Ala | Lys | Lys | Tyr | Tyr | Leu | Arg | Val | Ile | Ile | Trp | Asn | Thr | Lys | Asp | Val |
| | | | | 325 | | | | | 330 | | | | | 335 | |
| Ile | Leu | Asp | Glu | Lys | Ser | Ile | Thr | Gly | Glu | Glu | Met | Ser | Asp | Ile | Tyr |
| | | | 340 | | | | | 345 | | | | | 350 | | |
| Val | Lys | Gly | Trp | Ile | Pro | Gly | Asn | Glu | Glu | Asn | Lys | Gln | Lys | Thr | Asp |
| | | 355 | | | | | 360 | | | | | 365 | | | |
| Val | His | Tyr | Arg | Ser | Leu | Asp | Gly | Glu | Gly | Asn | Phe | Asn | Trp | Arg | Phe |
| | 370 | | | | | 375 | | | | | 380 | | | | |
| Val | Phe | Pro | Phe | Asp | Tyr | Leu | Pro | Ala | Glu | Gln | Leu | Cys | Ile | Val | Ala |
| 385 | | | | | 390 | | | | | 395 | | | | | 400 |
| Lys | Lys | Glu | His | Phe | Trp | Ser | Ile | Asp | Gln | Thr | Glu | Phe | Arg | Ile | Pro |
| | | | | 405 | | | | | 410 | | | | | 415 | |
| Pro | Arg | Leu | Ile | Ile | Gln | Ile | Trp | Asp | Asn | Asp | Lys | Phe | Ser | Leu | Asp |
| | | | 420 | | | | | 425 | | | | | 430 | | |
| Asp | Tyr | Leu | Gly | Phe | Leu | Glu | Leu | Asp | Leu | Arg | His | Thr | Ile | Ile | Pro |
| | | 435 | | | | | 440 | | | | | 445 | | | |
| Ala | Lys | Ser | Pro | Glu | Lys | Cys | Arg | Leu | Asp | Met | Ile | Pro | Asp | Leu | Lys |
| | 450 | | | | | 455 | | | | | 460 | | | | |
| Ala | Met | Asn | Pro | Leu | Lys | Ala | Lys | Thr | Ala | Ser | Leu | Phe | Glu | Gln | Lys |
| 465 | | | | | 470 | | | | | 475 | | | | | 480 |
| Ser | Met | Lys | Gly | Trp | Trp | Pro | Cys | Tyr | Ala | Glu | Lys | Asp | Gly | Ala | Arg |
| | | | | 485 | | | | | 490 | | | | | 495 | |
| Val | Met | Ala | Gly | Lys | Val | Glu | Met | Thr | Leu | Glu | Ile | Leu | Asn | Glu | Lys |
| | | | 500 | | | | | 505 | | | | | 510 | | |

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Ala | Asp | Glu | Arg | Pro | Ala | Gly | Lys | Gly | Arg | Asp | Glu | Pro | Asn | Met |
| | | 515 | | | | | 520 | | | | | 525 | | | |
| Asn | Pro | Lys | Leu | Asp | Leu | Pro | Asn | Arg | Pro | Glu | Thr | Ser | Phe | Leu | Trp |
| | 530 | | | | | 535 | | | | | 540 | | . | | |
| Phe | Thr | Asn | Pro | Cys | Lys | Thr | Met | Lys | Phe | Ile | Val | Trp | Arg | Arg | Phe |
| 545 | | | | | 550 | | | | | 555 | | | | | 560 |
| Lys | Trp | Val | Ile | Ile | Gly | Leu | Leu | Phe | Leu | Leu | Ile | Leu | Leu | Leu | Phe |
| | | | 565 | | | | | | 570 | | | | | 575 | |
| Val | Ala | Val | Leu | Leu | Tyr | Ser | Leu | Pro | Asn | Tyr | Leu | Ser | Met | Lys | Ile |
| | | | 580 | | | | | 585 | | | | | 590 | | |
| Val | Lys | Pro | Asn | Val | | | | | | | | | | | |
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| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Asn | Pro | Ser | Phe | Pro | Lys | Met | Gly | Val | Glu | Ser | Asp | Met | Glu | Asp | Glu |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Thr | Thr | Ala | Trp | Met | Asn | Leu | Lys | Pro | Thr | Lys | Ser | Cys | Thr | Ser | Thr |
| | | 35 | | | | | 40 | | | | | 45 | | | |
| Ser | Gly | Pro | Leu | Lys | Ser | Gly | Leu | Leu | Phe | Thr | Ser | Ser | Gly | Leu | Arg |
| | 50 | | | | | 55 | | | | | 60 | | | | |
| Gly | Trp | Ser | Leu | Ser | Thr | Trp | Lys | Gln | Gly | Leu | Cys | Thr | Ala | Pro | Ser |
| | | | | | 70 | | | | | 75 | | | | | 80 |
| Ser | Pro | Thr | Phe | Pro | Arg | Glu | Asn | Phe | Arg | Cys | Gly | Trp | Met | Phe | Ser |
| | | | | 85 | | | | | 90 | | | | | 95 | |
| Pro | Arg | Val | Trp | Gly | His | Gln | Ala | Leu | Leu | Ser | Thr | Ser | His | Pro | Gly |
| | | | 100 | | | | | 105 | | | | | 110 | | |
| Lys | Pro | Arg | Asn | Thr | Thr | Cys | Val | | | | | | | | |
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| Glu | Thr | Gln | Val | Val | Ile | Gln | Arg | Lys | Leu | Val | Ile | Val | Pro | Tyr | Leu |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Asn | Asp | Gln | Pro | Gly | Trp | Asp | Ser | Lys | Phe | Arg | Leu | Val | Asn | Thr | Pro |
| | | | 20 | | | | | 25 | | | | | 30 | | |

| | | | | | | | | | | | | | | | |
|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Glu | Met | Leu 35 | Phe | Phe | Arg | Asn | Asp 40 | Thr | Glu | Leu | Phe | Gly 45 | Trp | Lys | Val |
| Val | Lys 50 | Arg | Glu | Asn | Lys | Ser 55 | Pro | Val | Lys | Ile | Pro 60 | Phe | Thr | Ile | Gln |
| Arg 65 | Ser | Val | Met | Asp | Ile 70 | Cys | Phe | Leu | Phe | Val 75 | Phe | Phe | Ile | Ala | Arg 80 |
| Asn | Pro | Ala | Phe | Asp 85 | Val | Asp | Val | Thr | His 90 | Phe | Leu | Ser | Cys | Asp 95 | Ala |
| Phe | Leu | Val | Gln 100 | Asp | Asn | Val | Leu | Gly 105 | Val | Pro | Asp | Asp | His 110 | Thr | Gln |
| Val | Val | Phe 115 | Leu | Gly | Phe | Pro | Gly 120 | Cys | Asp | Val | Glu | Arg 125 | Arg | Ala | Trp |
| Trp | Pro 130 | Gln | Thr | Leu | Gly | Glu 135 | Asn | Ile | His | Pro | His 140 | Leu | Lys | Phe | Ser |
| Leu 145 | Gly | Asn | Val | Gly | Leu 150 | Glu | Gly | Ala | Val | Gln 155 | Ser | Pro | Cys | Phe | His 160 |
| Val | Leu | Arg | Asp | Gln 165 | Pro | Leu | Ser | Pro | Glu 170 | Asp | Val | Lys | Ser | Lys 175 | Pro |
| Leu | Phe | Arg | Gly 180 | Pro | Glu | Val | Leu | Val 185 | Gln | Asp | Phe | Val | Gly 190 | Phe | Lys |
| Phe | Ile | Gln 195 | Ala | Val | Val | Ser | Ser 200 | Ser | Ile | Ser | Asp | Ser 205 | Thr | Pro | Ile |
| Phe | Gly 210 | Lys | Asp | Gly | Leu | Trp 215 | Glu | Ala | Phe | Glu | Ser 220 | Gly | Asp | Ile | Leu |
| Lys 225 | Gln | Leu | Cys | Trp | Ser 230 | Gln | Leu | Ile | Ser | Pro 235 | Gly | Ile | Asp | Ser | Arg 240 |
| Asn | Thr | Val | Leu | Leu 245 | Trp | Tyr | Ala | Ala | Val 250 | Gly | Pro | Lys | Ala | Gly 255 | Lys |
| Glu | Ser | Val | Phe 260 | Gln | Ile | Asn | Asn | Cys 265 | Phe | Ser | Tyr | Phe | Phe 270 | Ile | Pro |
| Gly | Lys | Gly 275 | Val | Ile | Ile | Ile | Asp 280 | Arg | Asn | Phe | Gln | Val 285 | Phe | Phe | Leu |

Arg

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<212> PRT

<213> homo sapiens

<400> 291

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| Val | Pro | Ile | Phe 20 | His | Asn | Gly | Pro | Trp 25 | Val | Ser | Thr | Asn | His 30 | Pro | Val |

| | | | | | | | | | | | | | | | |
|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Ala | Arg | Phe 35 | Pro | Arg | Ile | Thr | Ser 40 | Leu | Ala | Ser | Glu | Gly 45 | Ile | Ile | Val |
| Pro | Ser 50 | Thr | Ser | Thr | Ile | Arg 55 | Gly | Met | Gly | Val | Trp 60 | Arg | Ala | Ser | Cys |
| Gly 65 | Asp | Cys | Arg | Ala | Asp 70 | Ser | Thr | Ser | Ser | Ile 75 | Ala | Gln | Asp | Arg | Gly 80 |
| Pro | Gly | Leu | Thr | Ile 85 | Gly | His | Gln | Ala | Leu 90 | Gly | Ser | Leu | Val | Trp 95 | Val |
| Gly | Glu | Ser | Trp 100 | Gly | Gln | Thr | Trp | Gly 105 | Glu | Tyr | Leu | Gly | Gly 110 | Pro | Arg |
| Trp | Leu | Gly 115 | Trp | Leu | Asp | Leu | Arg 120 | Gln | Ser | Trp | Ala | Leu 125 | Ser | Ile | Ser |
| Glu | Glu 130 | Val | Val | Lys | Lys | Arg 135 | Asp | Phe | Leu | Phe | His 140 | Phe | Leu | Asn | Phe |
| Leu 145 | Cys | Met | Leu | Val | Glu 150 | Asp | Met | Phe | Ala | His 155 | Lys | Leu | Arg | Thr | Leu 160 |
| Glu | Phe | Leu | Ala | Thr 165 | Glu | Arg | Thr | Gln | Pro 170 | Leu | Ile | Leu | Ala | Gln 175 | Phe |
| Leu | Arg | Val | Gly 180 | Gly | Asp | Glu | Leu | Leu 185 | His | Phe | Leu | Leu | Trp 190 | Val | Phe |
| Ala | Pro | His 195 | Leu | Leu | Gly | Leu | Phe 200 | Leu | | | | | | | |

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<212> PRT

<213> homo sapiens

<400> 292

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| Ser 1 | Val | Ile | Phe | Phe 5 | Lys | Ile | Gly | Phe | Cys 10 | Glu | Gly | Arg | Leu | Val 15 | Gly |
| Arg | Gly | Gly | Val 20 | Pro | Gly | Ser | Glu | Ala 25 | Gln | Ser | Cys | Val | Leu 30 | Ser | Ser |
| Ser | Val | Trp 35 | Ile | Ser | Leu | Ala | Ala 40 | Ser | Leu | Met | Ser | Leu 45 | Arg | Thr | Ile |
| Cys 50 | Leu | Cys | Trp | Val | Met | Pro 55 | Leu | Met | Leu | Arg | Thr 60 | Arg | Arg | Val | Arg |
| Ser 65 | Leu | Phe | Thr | Pro | Gly 70 | Leu | Ser | Ser | His | Ser 75 | Arg | Arg | Arg | Met | Phe 80 |
| Cys | Arg | Phe | Gln | Gln 85 | Ile | Ser | Leu | Met | Leu 90 | Thr | Leu | Arg | Ser | Lys 95 | Val |
| Thr | Gln | Pro | Arg 100 | Arg | Lys | Asn | Leu | Leu 105 | Ser | Gly | Trp | Gly | Ser 110 | Glu | Ser |
| Ala | Thr | Arg 115 | Ile | Lys | Pro | Gly | Tyr 120 | Leu | Leu | Gln | Arg | Glu 125 | Met | Ile | Ser |

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|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Arg | Glu | Met | Leu | Gly | Ala | Met | Leu | Arg | Met | Lys | Arg | Glu | Gln | Val |
| | 130 | | | | | 135 | | | | | 140 | | | | |
| Leu | Cys | Ser | Gly | Arg | Gly | Leu | His | Ser | Ser | Pro | Ala | Ala | Ser | Leu | Gly |
| 145 | | | | | 150 | | | | | 155 | | | | | 160 |
| Phe | Ser | His | Ser | Ser | Ser | Leu | Gly | Phe | Ser | Phe | | | | | |
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| Glu | Lys | Glu | Lys | Pro | Lys | Glu | Glu | Glu | Trp | Glu | Lys | Pro | Lys | Asp | Ala |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Ala | Gly | Leu | Glu | Cys | Lys | Pro | Arg | Pro | Leu | His | Lys | Thr | Cys | Ser | Leu |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Phe | Met | Arg | Asn | Ile | Ala | Pro | Asn | Ile | Ser | Arg | Ala | Glu | Ile | Ile | Ser |
| | | 35 | | | | | 40 | | | | | 45 | | | |
| Leu | Cys | Lys | Arg | Tyr | Pro | Gly | Phe | Met | Arg | Val | Ala | Leu | Ser | Glu | Pro |
| | 50 | | | | | 55 | | | | | 60 | | | | |
| Gln | Pro | Glu | Arg | Arg | Phe | Phe | Arg | Arg | Gly | Trp | Val | Thr | Phe | Asp | Arg |
| 65 | | | | | 70 | | | | | 75 | | | | | 80 |
| Ser | Val | Asn | Ile | Lys | Glu | Ile | Cys | Trp | Asn | Leu | Gln | Asn | Ile | Arg | Leu |
| | | | | 85 | | | | | 90 | | | | | 95 | |
| Arg | Glu | Cys | Glu | Leu | Ser | Pro | Gly | Val | Asn | Arg | Asp | Leu | Thr | Arg | Arg |
| | | | 100 | | | | | 105 | | | | | 110 | | |
| Val | Arg | Asn | Ile | Asn | Gly | Ile | Thr | Gln | His | Lys | Gln | Ile | Val | Arg | Asn |
| | | 115 | | | | | 120 | | | | | 125 | | | |
| Asp | Ile | Lys | Leu | Ala | Ala | Lys | Leu | Ile | His | Thr | Leu | Asp | Asp | Arg | Thr |
| | 130 | | | | | 135 | | | | | 140 | | | | |
| Gln | Leu | Trp | Ala | Ser | Glu | Pro | Gly | Thr | Pro | Pro | Leu | Pro | Thr | Ser | Leu |
| 145 | | | | | 150 | | | | | 155 | | | | | 160 |
| Pro | Ser | Gln | Asn | Pro | Ile | Leu | Lys | Asn | Ile | Thr | Asp | Tyr | Leu | Ile | Glu |
| | | | | 165 | | | | | 170 | | | | | 175 | |
| Glu | Val | Ser | Ala | Glu | Glu | Glu | Glu | Leu | Leu | Gly | Ser | Ser | Gly | Gly | Ala |
| | | | 180 | | | | | 185 | | | | | 190 | | |
| Pro | Pro | Glu | Glu | Pro | Pro | Lys | Glu | Gly | Asn | Pro | Ala | Glu | Ile | Asn | Val |
| | | 195 | | | | | 200 | | | | | 205 | | | |
| Glu | Arg | Asp | Glu | Lys | Leu | Ile | Lys | Val | Leu | Asp | Lys | Leu | Leu | Leu | Tyr |
| | 210 | | | | | 215 | | | | | 220 | | | | |
| Leu | Arg | Ile | Val | His | Ser | Leu | Asp | Tyr | Tyr | Asn | Thr | Cys | Glu | Tyr | Pro |
| 225 | | | | | 230 | | | | | 235 | | | | | 240 |
| Asn | Glu | Asp | Glu | Met | Pro | Asn | Arg | Cys | Gly | Ile | Ile | His | Val | Arg | Gly |

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| | | | | 245 | | | | | 250 | | | | | 255 | | |
| Pro | Met | Pro | Pro | Asn | Arg | Ile | Ser | His | Gly | Glu | Val | Leu | Glu | Trp | Gln | |
| | | | 260 | | | | | 265 | | | | | 270 | | | |
| Lys | Thr | Phe | Glu | Glu | Lys | Leu | Thr | Pro | Leu | Leu | Ser | Val | Arg | Glu | Ser | |
| | | 275 | | | | | 280 | | | | | 285 | | | | |
| Leu | Ser | Glu | Glu | Glu | Ala | Gln | Lys | Met | Gly | Arg | Lys | Asp | Pro | Glu | Gln | |
| | 290 | | | | | 295 | | | | | 300 | | | | | |
| Glu | Val | Glu | Lys | Phe | Val | Thr | Ser | Asn | Thr | Gln | Glu | Leu | Gly | Lys | Asp | |
| 305 | | | | | 310 | | | | | 315 | | | | | 320 | |
| Lys | Trp | Leu | Cys | Pro | Leu | Ser | Gly | Lys | Lys | Phe | Lys | Gly | Pro | Glu | Phe | |
| | | | | 325 | | | | | 330 | | | | | 335 | | |
| Val | Arg | Lys | His | Ile | Phe | Asn | Lys | His | Ala | Glu | Lys | Ile | Glu | Glu | Val | |
| | | | 340 | | | | | 345 | | | | | 350 | | | |
| Lys | Lys | Glu | Val | Ala | Phe | Phe | Asn | Asn | Phe | Leu | Thr | Asp | Ala | Lys | Arg | |
| | | 355 | | | | | 360 | | | | | 365 | | | | |
| Pro | Ala | Leu | Pro | Glu | Ile | Lys | Pro | Ala | Gln | Pro | Pro | Gly | Pro | Ala | Gln | |
| | 370 | | | | | 375 | | | | | 380 | | | | | |
| Ile | Leu | Pro | Pro | Gly | Leu | Thr | Pro | Gly | Leu | Pro | Tyr | Pro | His | Gln | Thr | |
| 385 | | | | | 390 | | | | | 395 | | | | | 400 | |
| Pro | Gln | Gly | Leu | Met | Pro | Tyr | Gly | Gln | Pro | Arg | Pro | Pro | Ile | Leu | Gly | |
| | | | | 405 | | | | | 410 | | | | | 415 | | |
| Tyr | Gly | Ala | Gly | Ala | Val | Arg | Pro | Ala | Val | Pro | Thr | Gly | Gly | Pro | Pro | |
| | | | 420 | | | | | 425 | | | | | 430 | | | |
| Tyr | Pro | His | Ala | Pro | Tyr | Gly | Ala | Gly | Arg | Gly | Asn | Tyr | Asp | Ala | Phe | |
| | | 435 | | | | 440 | | | | | | 445 | | | | |
| Arg | Gly | Gln | Gly | Gly | Tyr | Pro | Gly | Lys | Pro | Arg | Asn | Arg | Met | Val | Arg | |
| | 450 | | | | | 455 | | | | | 460 | | | | | |
| Gly | Asp | Pro | Arg | Ala | Ile | Val | Glu | Tyr | Arg | Asp | Leu | Asp | Ala | Pro | Asp | |
| 465 | | | | | 470 | | | | | 475 | | | | | 480 | |
| Asp | Val | Asp | Phe | Phe | | | | | | | | | | | | |
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| 1 | | | | 5 | | | | | 10 | | | | | 15 | | |
| Ser | Cys | Trp | Val | Lys | Thr | Ser | Glu | Ser | Thr | Arg | Pro | Tyr | Gln | Leu | Leu | |
| | | | 20 | | | | | 25 | | | | | 30 | | | |
| Arg | Arg | Arg | Arg | Pro | Thr | Leu | Ile | Thr | Tyr | Arg | Ile | Phe | Arg | His | Arg | |
| | | 35 | | | | | 40 | | | | | 45 | | | | |

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|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Arg | His 50 | Lys | Asp | Thr | Ser | Ser 55 | Gly | Asp | His | Leu | Thr 60 | Cys | Arg | Leu | Asp |
| Pro 65 | Gln | Ala | Lys | Asp | Leu 70 | Lys | Asp | Gly | Thr | Gln 75 | Glu | Glu | Ala | Thr | Lys 80 |
| Arg | Gln | Glu | Ala | Pro 85 | Val | Asp | Pro | Arg | Pro 90 | Glu | Gly | Asp | Pro | Gln 95 | Arg |
| Thr | Val | Ile | Ser 100 | Trp | Arg | Gly | Ala | Val 105 | Ile | Glu | Pro | Glu | Gln 110 | Gly | Thr |
| Glu | Leu | Pro 115 | Ser | Arg | Arg | Ala | Glu 120 | Val | Pro | Thr | Lys | Pro 125 | Pro | Leu | Pro |
| Pro | Ala 130 | Arg | Thr | Gln | Gly | Thr 135 | Pro | Val | His | Leu | Asn 140 | Tyr | Arg | Gln | Lys |
| Gly 145 | Val | Ile | Asp | Val | Phe 150 | Leu | His | Ala | Trp | Lys 155 | Gly | Tyr | Arg | Lys | Phe 160 |
| Ala | Trp | Gly | His | Asp 165 | Glu | Leu | Lys | Pro | Val 170 | Ser | Arg | Ser | Phe | Ser 175 | Glu |
| Trp | Phe | Gly | Leu 180 | Gly | Leu | Thr | Leu | Ile 185 | Asp | Ala | Leu | Asp | Thr 190 | Met | Trp |
| Ile | Leu | Gly 195 | Leu | Arg | Lys | Glu | Phe 200 | Glu | Glu | Ala | Arg | Lys 205 | Trp | Val | Ser |
| Lys | Lys 210 | Leu | His | Phe | Glu | Lys 215 | Asp | Val | Asp | Val | Asn 220 | Leu | Phe | Glu | Ser |
| Thr 225 | Ile | Arg | Ile | Leu | Gly 230 | Gly | Leu | Leu | Ser | Ala 235 | Tyr | His | Leu | Ser | Gly 240 |
| Asp | Ser | Leu | Phe | Leu 245 | Arg | Lys | Ala | Glu | Asp 250 | Phe | Gly | Asn | Arg | Leu 255 | Met |
| Pro | Ala | Phe | Arg 260 | Thr | Pro | Ser | Lys | Ile 265 | Pro | Tyr | Ser | Asp | Val 270 | Asn | Ile |
| Gly | Thr | Gly 275 | Val | Ala | His | Pro | Pro 280 | Arg | Trp | Thr | Ser | Asp 285 | Ser | Thr | Val |
| Ala | Glu 290 | Val | Thr | Ser | Ile | Gln 295 | Leu | Glu | Phe | Arg | Glu 300 | Leu | Ser | Arg | Leu |
| Thr 305 | Gly | Asp | Lys | Lys | Phe 310 | Gln | Glu | Ala | Val | Glu 315 | Lys | Val | Thr | Gln | His 320 |
| Ile | His | Gly | Leu | Ser 325 | Gly | Lys | Lys | Asp | Gly 330 | Leu | Val | Pro | Met | Phe 335 | Ile |
| Asn | Thr | His | Ser 340 | Gly | Pro | Val | Ser | Pro 345 | Thr | Trp | Gly | Val | Phe 350 | His | Gly |
| Gly | Ala | Pro 355 | Gly | Ala | Asp | Ser | Leu 360 | Leu | Leu | Ser | Tyr | Leu 365 | Phe | Glu | Arg |

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| Ala 1 | Leu | Arg | Ser | Pro 5 | Pro | Arg | Met | Arg | Ile 10 | Val | Leu | Ser | Asn | Arg 15 | Leu |
| Thr | Ser | Thr | Ser 20 | Phe | Ser | Lys | Cys | Asn 25 | Phe | Phe | Asp | Thr | His 30 | Phe | Leu |
| Ala | Ser | Ser 35 | Asn | Ser | Phe | Leu | Arg 40 | Pro | Lys | Ile | His | Met 45 | Val | Ser | Ser |
| Ala | Ser 50 | Ile | Ser | Val | Arg | Pro 55 | Arg | Pro | Asn | His | Ser 60 | Leu | Lys | Asp | Leu |
| Asp 65 | Thr | Gly | Phe | Ser | Ser 70 | Ser | Trp | Pro | His | Ala 75 | Asn | Leu | Arg | Tyr | Pro 80 |
| Phe | His | Ala | Cys | Arg 85 | Lys | Thr | Ser | Ile | Thr 90 | Pro | Phe | Trp | Arg | | |

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<212> PRT

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| Leu 1 | Leu | Arg | His | Pro 5 | Leu | Pro | Gly | Phe | Leu 10 | Lys | Phe | Phe | Pro | Gln 15 | Thr |
| Gln | Asp | Pro | His 20 | Gly | Val | Gln | Arg | Val 25 | Asp | Gln | Cys | Glu | Thr 30 | Glu | Ala |
| Lys | Pro | Leu 35 | Thr | Glu | Gly | Pro | Gly 40 | His | Arg | Leu | Gln | Leu 45 | Val | Met | Ala |
| Pro | Cys 50 | Lys | Leu | Ala | Val | Ser 55 | Phe | Pro | Cys | Met | Gln 60 | Glu | Asp | Val | Asn |
| His 65 | Ala | Leu | Leu | Ala | Ile 70 | Val | Gln | Met | His | Trp 75 | Cys | Ala | Leu | Cys | Pro 80 |
| Gly | Arg | Trp | Gln | Gly 85 | Arg | Leu | Gly | Gly | His 90 | Phe | Cys | Ser | Ser | | |

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| Ser 1 | Gly | Pro | Leu | Leu 5 | Ala | Gly | Pro | Ala | Thr 10 | Leu | Thr | Gly | Arg | Met 15 | Ser |
| Glu | Val | Arg | Leu 20 | Pro | Pro | Leu | Arg | Ala 25 | Leu | Asp | Asp | Phe | Val 30 | Leu | Gly |
| Ser | Ala | Arg 35 | Leu | Ala | Ala | Pro | Asp 40 | Pro | Cys | Asp | Pro | Gln 45 | Arg | Trp | Cys |

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| His | Arg | Val | Ile | Asn | Asn | Leu | Leu | Tyr | Tyr | Gln | Thr | Asn | Tyr | Leu | Leu |
| | 50 | | | | | 55 | | | | | 60 | | | | |
| Cys | Phe | Gly | Ile | Gly | Leu | Ala | Leu | Ala | Gly | Tyr | Val | Arg | Pro | Leu | His |
| 65 | | | | | 70 | | | | | 75 | | | | | 80 |
| Thr | Leu | Leu | Ser | Ala | Leu | Val | Val | Ala | Val | Ala | Leu | Gly | Val | Leu | Val |
| | | | | 85 | | | | | 90 | | | | | 95 | |
| Trp | Ala | Ala | Glu | Thr | Arg | Ala | Leu | Cys | Ala | Ala | Ala | Ala | Ala | Ala | Thr |
| | | | 100 | | | | | 105 | | | | | 110 | | |
| Leu | Gln | Pro | Ala | Trp | Pro | Gln | Cys | Leu | Pro | Ser | Ala | Ser | Trp | Cys | Ser |
| | | 115 | | | | | 120 | | | | | 125 | | | |
| Gly | Ser | Arg | Ala | Ala | Leu | Ala | Pro | Ser | Cys | Ser | Ala | Ser | Pro | Gly | Arg |
| | 130 | | | | | 135 | | | | | 140 | | | | |
| Cys | Phe | | | | | | | | | | | | | | |
| 145 | | | | | | | | | | | | | | | |

<210> 298
 <211> 152
 <212> PRT
 <213> homo sapiens

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|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Thr | Gln | Arg | His | Ser | His | Pro | Pro | Phe | Ser | Met | Leu | Ile | Pro | Lys | Leu |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Gly | Pro | Gly | Ala | Arg | His | Ser | Gln | Ile | Leu | Asn | Pro | Gly | Pro | Lys | Leu |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Phe | Gln | Thr | Pro | Pro | Tyr | Leu | Pro | Thr | Gln | Val | Lys | Thr | Leu | Pro | Asn |
| | | 35 | | | | | 40 | | | | | 45 | | | |
| Leu | Glu | Leu | Arg | Thr | Gln | Val | Phe | His | Ala | Pro | Val | Trp | Met | Glu | Ser |
| | 50 | | | | | 55 | | | | | 60 | | | | |
| Gly | Ile | Leu | Thr | Val | Gly | Pro | Leu | Val | Gln | Val | Ile | Pro | Thr | Leu | Thr |
| 65 | | | | | 70 | | | | | 75 | | | | | 80 |
| Ser | Pro | Ile | Cys | Leu | Pro | Pro | Ala | Leu | Leu | Arg | His | Phe | Ala | Pro | His |
| | | | | 85 | | | | | 90 | | | | | 95 | |
| Pro | Asn | Val | Pro | His | His | Arg | Gln | Pro | Arg | Gly | Glu | Val | Gly | Thr | Gly |
| | | | 100 | | | | | 105 | | | | | 110 | | |
| Leu | Ser | Arg | Glu | Trp | Gly | Val | Tyr | Val | Ser | Val | Ala | Ala | Thr | Ile | Lys |
| | | 115 | | | | | 120 | | | | | 125 | | | |
| Pro | Val | Ala | Ser | Leu | Met | Pro | Lys | Lys | Lys | Lys | Lys | Ser | Thr | Gly | Arg |
| | 130 | | | | | 135 | | | | | 140 | | | | |
| Lys | Tyr | Ser | Ser | Ser | Ser | Arg | Pro | | | | | | | | |
| 145 | | | | | 150 | | | | | | | | | | |

<210> 299
 <211> 172
 <212> PRT
 <213> homo sapiens

<400> 299

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| Arg 1 | Thr | Thr | Thr | Thr 5 | Thr | Ile | Phe | Ala | Ala 10 | Gly | Arg | Leu | Phe | Phe 15 | Phe |
| Phe | Trp | His | Glu 20 | Arg | Cys | Asn | Arg | Leu 25 | Tyr | Cys | Cys | Ser | Asn 30 | Thr | Asn |
| Ile | Tyr | Ala 35 | Pro | Phe | Pro | Ala | Glu 40 | Ala | Cys | Pro | His | Leu 45 | Thr | Pro | Trp |
| Leu | Ser 50 | Met | Val | Trp | Asn | Ile 55 | Gly | Val | Arg | Gly | Lys 60 | Met | Pro | Lys | Gln |
| Ser 65 | Trp | Arg | Glu | Ala | Asn 70 | Gly | Thr | Gly | Glu | Gly 75 | Arg | Asp | His | Leu | Asp 80 |
| Gln | Gly | Ser | Asn | Ser 85 | Gln | Asp | Thr | Arg | Leu 90 | His | Pro | His | Arg | Gly 95 | Met |
| Glu | His | Leu | Gly 100 | Ser | Glu | Phe | Lys | Ile 105 | Trp | Gln | Cys | Leu | Asp 110 | Leu | Gly |
| Trp | Lys | Val 115 | Gly | Trp | Gly | Leu | Glu 120 | Lys | Leu | Trp | Ser | Arg 125 | Val | Gln | Asp |
| Leu | Arg 130 | Val | Pro | Cys | Ser | Arg 135 | Pro | Gln | Phe | Gly | Asp 140 | Glu | His | Gly | Glu |
| Gly 145 | Trp | Met | Gly | Val | Ser 150 | Leu | Gly | Ser | Gln | Phe 155 | Glu | Ile | Gly | His | Gly 160 |
| Cys | Ser | Gly | Leu | Lys 165 | Pro | Gln | Phe | Trp | Gly 170 | Trp | Met | | | | |

<210> 300

<211> 178

<212> PRT

<213> homo sapiens

<400> 300

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| Trp 1 | Phe | Trp | Arg | Glu 5 | Ser | Tyr | Trp | Gln | Thr 10 | Ile | Lys | Val | Asp | Leu 15 | Gln |
| Val | Glu | His | Pro 20 | Tyr | Gln | Phe | Leu | Leu 25 | Lys | Tyr | Ala | Lys | Gln 30 | Leu | Lys |
| Gly | Asp | Lys 35 | Asn | Lys | Ile | Gln | Lys 40 | Leu | Val | Gln | Met | Ala 45 | Trp | Thr | Phe |
| Val | Asn 50 | Asp | Ser | Leu | Cys | Thr 55 | Thr | Leu | Ser | Leu | Gln 60 | Trp | Glu | Pro | Glu |
| Ile 65 | Ile | Ala | Val | Ala | Val 70 | Met | Tyr | Leu | Ala | Gly 75 | Arg | Leu | Cys | Lys | Phe 80 |
| Glu | Ile | Gln | Glu | Trp 85 | Thr | Ser | Lys | Pro | Met 90 | Tyr | Arg | Arg | Trp | Trp 95 | Glu |
| Gln | Phe | Val | Gln 100 | Asp | Val | Pro | Val | Asp 105 | Val | Leu | Glu | Asp | Ile 110 | Cys | His |

| | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|
| Gln | Ile | Leu | Asp | Leu | Tyr | Ser | Gln | Gly | Lys | Gln | Gln | Met | Pro | His | His | |
| | | 115 | | | | | 120 | | | | | 125 | | | | |
| Thr | Pro | His | Gln | Leu | Gln | Gln | Pro | Pro | Ser | Pro | Glu | Pro | Pro | Thr | Pro | |
| | 130 | | | | | 135 | | | | | 140 | | | | | |
| Leu | Pro | Gly | Pro | Cys | Gly | Cys | Trp | Ala | Ser | His | Leu | Lys | Glu | Gly | Lys | |
| 145 | | | | | 150 | | | | | 155 | | | | | 160 | |
| Val | Val | Gln | Pro | Glu | Pro | Val | Glu | Gln | Cys | Pro | Val | Trp | Pro | Pro | Lys | |
| | | | | 165 | | | | | 170 | | | | | 175 | | |
| Pro | Lys | | | | | | | | | | | | | | | |

<210> 301
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 <212> PRT
 <213> homo sapiens

<400> 301

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| Cys | Ile | Ser | Gln | Asp | Val | Cys | Ala | Asn | Leu | Lys | Tyr | Lys | Asn | Gly | Pro | |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | | |
| Pro | Asn | Pro | Cys | Ile | Gly | Asp | Gly | Gly | Ser | Ser | Leu | Phe | Lys | Met | Ser | |
| | | | 20 | | | | | 25 | | | | | 30 | | | |
| Arg | Ser | Thr | Phe | Trp | Lys | Thr | Ser | Ala | Thr | Lys | Ser | Trp | Ile | Phe | Thr | |
| | | 35 | | | | | 40 | | | | | 45 | | | | |
| His | Lys | Glu | Asn | Asn | Arg | Cys | Leu | Ile | Thr | Pro | Pro | Ile | Ser | Cys | Asn | |
| | 50 | | | | | 55 | | | | | 60 | | | | | |
| Ser | Pro | His | Leu | Leu | Ser | Leu | Pro | Pro | Arg | Cys | Leu | Gly | Pro | Val | Val | |
| 65 | | | | | 70 | | | | | 75 | | | | | 80 | |
| Ala | Gly | Pro | Pro | Thr | Ser | Arg | Arg | Gly | Arg | Leu | Tyr | Ser | Pro | Asn | Pro | |
| | | | | 85 | | | | | 90 | | | | | 95 | | |
| Trp | Ser | Asn | Ala | Leu | Ser | Gly | Leu | Gln | Asn | Gln | Asn | Lys | Thr | Gly | Ser | |
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Leu

<210> 302
 <211> 90
 <212> PRT
 <213> homo sapiens

<400> 302

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|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|
| Gly | Gly | Arg | Pro | Ser | Asn | His | Arg | Ala | Gln | Ala | Ala | Gly | Trp | Glu | Ala | |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | | |
| Gln | Glu | Met | Gly | Ala | Val | Ala | Ala | Asp | Gly | Gly | Cys | Asp | Glu | Ala | Ser | |
| | | | 20 | | | | | 25 | | | | | 30 | | | |
| Val | Val | Phe | Leu | Val | Ser | Lys | Asp | Pro | Gly | Phe | Gly | Gly | Arg | Cys | Leu | |
| | | 35 | | | | | 40 | | | | | 45 | | | | |
| Pro | Lys | Arg | Arg | Pro | Gly | His | Leu | Glu | Gln | Thr | Ala | Pro | Thr | Ile | Ser | |
| | 50 | | | | | 55 | | | | | 60 | | | | | |

| | | | | | | | | | | | | | | | |
|-----------|-----|-----|-----|-----------|-----------|-----|-----|-----|-----------|-----------|-----|-----|-----|-----|-----------|
| Tyr 65 | Thr | Trp | Val | Trp | Arg 70 | Ser | Ile | Leu | Val | Phe 75 | Gln | Ile | Cys | Thr | Asn 80 |
| Val | Leu | Arg | Asp | Thr 85 | Ser | Leu | Leu | Leu | Leu 90 | | | | | | |

<210> 303
 <211> 158
 <212> PRT
 <213> homo sapiens

<400> 303

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| Thr 1 | Gln | Val | Met | Val 5 | Gln | Ser | Met | Phe | Ala 10 | Pro | Thr | Asp | Thr | Ser 15 | Asp |
| Met | Glu | Ala | Val 20 | Trp | Lys | Glu | Ala | Lys 25 | Pro | Glu | Asp | Leu | Met 30 | Asp | Ser |
| Lys | Leu | Arg 35 | Cys | Val | Phe | Glu | Leu 40 | Pro | Ala | Glu | Asn | Asp 45 | Lys | Pro | His |
| Asp | Val 50 | Glu | Ile | Asn | Lys | Ile 55 | Ile | Ser | Thr | Thr | Ala 60 | Ser | Lys | Thr | Glu |
| Thr 65 | Pro | Ile | Val | Ser | Lys 70 | Ser | Leu | Ser | Ser | Ser 75 | Leu | Asp | Asp | Thr | Glu 80 |
| Val | Lys | Lys | Val | Met 85 | Glu | Glu | Cys | Lys | Arg 90 | Leu | Gln | Gly | Glu | Val 95 | Gln |
| Arg | Leu | Arg | Glu 100 | Glu | Asn | Lys | Gln | Phe 105 | Lys | Glu | Glu | Asp | Gly 110 | Leu | Arg |
| Met | Arg | Lys 115 | Thr | Val | Gln | Ser | Asn 120 | Ser | Pro | Ile | Ser | Ala 125 | Leu | Ala | Pro |
| Thr | Gly 130 | Lys | Glu | Glu | Gly | Leu 135 | Ser | Thr | Arg | Leu | Leu 140 | Ala | Leu | Val | Val |
| Leu 145 | Phe | Phe | Ile | Val | Gly 150 | Val | Ile | Ile | Gly | Lys 155 | Ile | Ala | Leu | | |

<210> 304
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 <212> PRT
 <213> homo sapiens

<400> 304

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| Val 1 | Asn | Lys | Ala | Leu 5 | Pro | Phe | Ile | Ser | Lys 10 | Ala | Leu | Gly | Gln | Ser 15 | Val |
| Asn | Thr | Arg | Leu 20 | Ser | Leu | Met | Thr | Ser 25 | Thr | Ser | Asp | Ala | Ala 30 | Thr | Val |
| Gln | Phe | Leu 35 | Trp | Ala | Ser | Asp | Ser 40 | Val | His | Gln | Ser | Gln 45 | Gly | Ala | Asp |
| Gly | Leu 50 | Asp | Arg | Thr | Glu | Asp 55 | Thr | Glu | Ser | Ser | Leu 60 | Gly | Arg | Glu | Trp |

| | | | | | | | | | | | | | | | |
|-----------|-----|-----|------------|-----------|-----------|-----|-----|------------|-----------|-----------|-----|-----|------------|-----------|-----------|
| Ala 65 | Thr | Trp | Gly | Leu | Leu 70 | Cys | Gly | Ala | Asp | Arg 75 | Thr | Pro | Gln | His | Ala 80 |
| Gly | Leu | Gln | Leu | Pro 85 | Lys | Gly | Gln | His | Gln 90 | Gln | Ala | Arg | Lys | Gly 95 | Val |
| Ile | Leu | Arg | Glu 100 | Val | Ile | Gln | His | His 105 | Val | Pro | Arg | Pro | Thr 110 | Asn | Val |

<210> 305

<211> 105

<212> PRT

<213> homo sapiens

<400> 305

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| Phe 1 | Lys | Gly | Lys | Thr 5 | Cys | Glu | Met | Ser | Ser 10 | Tyr | Ile | Asn | Phe | Phe 15 | Leu |
| His | Met | Val | Met 20 | Ile | Asn | Leu | Asn | Pro 25 | Met | Ile | Trp | Trp | Ile 30 | His | Gln |
| Ser | Asn | Leu 35 | Pro | Ser | Cys | Ala | Cys 40 | Tyr | Leu | Tyr | Lys | Ala 45 | Ile | Phe | Pro |
| Ile | Ile 50 | Thr | Pro | Thr | Ile | Lys 55 | Asn | Lys | Thr | Thr | Arg 60 | Ala | Lys | Ser | Arg |
| Val 65 | Leu | Arg | Pro | Ser | Ser 70 | Phe | Pro | Val | Gly | Ala 75 | Asn | Ala | Glu | Met | Gly 80 |
| Leu | Leu | Leu | Cys | Thr 85 | Val | Phe | Leu | Ile | Arg 90 | Ser | Pro | Ser | Ser | Ser 95 | Leu |
| Asn | Cys | Leu | Phe 100 | Ser | Ser | Arg | Ser | Leu 105 | | | | | | | |

<210> 306

<211> 126

<212> PRT

<213> homo sapiens

<400> 306

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| Arg 1 | Pro | Pro | Gln | Arg 5 | Thr | Leu | Arg | His | Ser 10 | Ala | Gln | Leu | Gly | Ala 15 | Ala |
| Pro | Ala | Ala | Leu 20 | Pro | Gln | Pro | Leu | Trp 25 | Glu | Leu | Pro | Arg | Ala 30 | His | Gly |
| Ser | Gln | Arg 35 | Gln | Pro | Gly | Pro | Gly 40 | Glu | Ala | Ala | Asp | His 45 | Ala | Glu | Gln |
| Glu | Arg 50 | Glu | Glu | Ala | Ala | Glu 55 | Arg | Pro | Gly | Ser | Ser 60 | Pro | Glu | Glu | Gly |
| Gln 65 | Glu | Gly | Ser | Gly | Ala 70 | Phe | Gly | Gly | His | Thr 75 | Gly | His | Arg | Ala | Cys 80 |
| Ala | Arg | Cys | Leu | Gly 85 | Arg | Gly | Ala | Leu | Gly 90 | Gly | Arg | Ile | Pro | Cys 95 | Gly |
| Leu | Leu | Cys | Gln | Leu | Phe | Arg | Arg | Asp | Gly | Cys | Pro | Ala | Asp | Ser | Glu |

| | | | | | | | | | | | | | | | | |
|-------|--------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| | | | 100 | | | | 105 | | | | 110 | | | | | |
| | Val | Gln | His 115 | His | Ile | His | Gln | His 120 | Trp | Gln | Gln | Leu | Leu 125 | Pro | | |
| <210> | 307 | | | | | | | | | | | | | | | |
| <211> | 240 | | | | | | | | | | | | | | | |
| <212> | PRT | | | | | | | | | | | | | | | |
| <213> | homo sapiens | | | | | | | | | | | | | | | |
| <400> | 307 | | | | | | | | | | | | | | | |
| | Asn 1 | Val | Gly | Arg | Cys 5 | Cys | Glu | Ala | Gln | Ala 10 | Arg | Ala | Gly | Ala | Ala 15 | Ser |
| | Leu | Asn | Ala | Ser 20 | Leu | Asp | Gly | Leu | His 25 | Asn | Ala | Leu | Phe | Ala 30 | Thr | Gln |
| | Arg | Ser | Leu 35 | Glu | Gln | His | Gln | Arg 40 | Leu | Phe | His | Ser | Leu 45 | Phe | Gly | Asn |
| | Phe | Gln 50 | Gly | Leu | Met | Glu | Ala 55 | Asn | Val | Ser | Leu | Asp 60 | Leu | Gly | Lys | Leu |
| | Gln 65 | Thr | Met | Leu | Ser | Arg 70 | Lys | Gly | Lys | Lys | Gln 75 | Gln | Lys | Asp | Leu | Glu 80 |
| | Ala | Pro | Arg | Lys | Arg 85 | Asp | Lys | Lys | Glu | Ala 90 | Glu | Pro | Leu | Val | Asp 95 | Ile |
| | Arg | Val | Thr | Gly 100 | Pro | Val | Pro | Gly | Ala 105 | Leu | Gly | Ala | Ala | Leu 110 | Trp | Glu |
| | Ala | Gly | Ser 115 | Pro | Val | Ala | Phe | Tyr 120 | Ala | Ser | Phe | Ser | Glu 125 | Gly | Thr | Ala |
| | Ala | Leu 130 | Gln | Thr | Val | Lys | Phe 135 | Asn | Thr | Thr | Tyr | Ile 140 | Asn | Ile | Gly | Ser |
| | Ser 145 | Tyr | Phe | Pro | Glu | His 150 | Gly | Tyr | Phe | Arg | Ala 155 | Pro | Glu | Arg | Gly | Val 160 |
| | Tyr | Leu | Phe | Ala | Val 165 | Ser | Val | Glu | Phe | Gly 170 | Pro | Gly | Pro | Gly | Thr 175 | Gly |
| | Gln | Leu | Val | Phe 180 | Gly | Gly | His | His | Arg 185 | Thr | Pro | Val | Cys | Thr 190 | Thr | Gly |
| | Gln | Gly | Ser 195 | Gly | Ser | Thr | Ala | Thr 200 | Val | Phe | Ala | Met | Ala 205 | Glu | Leu | Gln |
| | Lys | Gly 210 | Glu | Arg | Val | Trp | Phe 215 | Glu | Leu | Thr | Gln | Gly 220 | Ser | Ile | Thr | Lys |
| | Arg 225 | Ser | Leu | Ser | Gly | Thr 230 | Ala | Phe | Gly | Gly | Phe 235 | Leu | Met | Phe | Lys | Thr 240 |
| <210> | 308 | | | | | | | | | | | | | | | |
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| <212> | PRT | | | | | | | | | | | | | | | |
| <213> | homo sapiens | | | | | | | | | | | | | | | |
| <400> | 308 | | | | | | | | | | | | | | | |

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|-----------|-----------|------------|------------|-----------|-----------|-----------|------------|------------|-----------|-----------|-----------|-----------|------------|-----------|-----------|
| Lys 1 | Ala | Gly | Ile | Glu 5 | Gly | His | Arg | Gly | Ser 10 | Cys | Leu | Pro | Glu | Arg 15 | Arg |
| Ala | Gln | Gly | Thr 20 | Trp | His | Arg | Pro | Cys 25 | Asp | Pro | Tyr | Val | His 30 | Gln | Arg |
| Leu | Arg | Phe 35 | Leu | Leu | Val | Pro | Leu 40 | Pro | Gly | Ser | Phe | Gln 45 | Val | Phe | Leu |
| Leu | Leu 50 | Leu | Pro | Phe | Pro | Ala 55 | Gln | His | Gly | Leu | Gln 60 | Leu | Pro | Gln | Val |
| Gln 65 | Ala | Asp | Val | Gly | Phe 70 | His | Glu | Pro | Leu | Glu 75 | Val | Pro | Lys | Glu | Ala 80 |
| Val | Glu | Glu | Pro | Leu 85 | Val | Leu | Leu | Gln | Ala 90 | Ala | Leu | Ser | Gly | Glu 95 | Glu |
| Cys | Val | Val | Glu 100 | Ala | Val | Lys | Gly | Gly 105 | Val | Glu | Gly | Gly | Gly 110 | Pro | Gly |
| Pro | Gly | Leu 115 | Gly | Leu | Ala | Ala | Pro 120 | Pro | Asp | Ile | | | | | |

<210> 309
 <211> 84
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 <213> homo sapiens

<400> 309

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| Pro 1 | Thr | Thr | Thr | Leu 5 | Val | Ile | Pro | Leu | Phe 10 | Phe | Leu | Ser | Ser | Arg 15 | Lys |
| Arg | Lys | Gln | Lys 20 | Asp | Ser | Phe | Gln | Thr 25 | Ala | Leu | Cys | Ser | Leu 30 | His | Cys |
| Ser | Phe | Pro 35 | Lys | Gln | Ala | Ala | Ser 40 | Thr | Gly | Lys | Ala | His 45 | Val | Val | Thr |
| Pro | Tyr 50 | Phe | Ser | Glu | Val | Leu 55 | Leu | Phe | His | Gly | Val 60 | Thr | Leu | Leu | Ser |
| Glu 65 | Ser | Lys | Phe | Arg | Lys 70 | Gln | Val | Leu | Pro | Leu 75 | Ala | Asp | Lys | Asn | His 80 |
| Thr | Ser | Phe | Leu | | | | | | | | | | | | |

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<400> 310

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| Cys 1 | Asp | Arg | Val | Pro 5 | Leu | Phe | Leu | Ser | Tyr 10 | Trp | Cys | Ala | Val | Ala 15 | Asp |
| Ser | Trp | Leu | Thr 20 | Ala | Ser | Ser | Val | Ser 25 | His | Val | Lys | Gly | Ile 30 | Leu | Ser |
| Pro | Gln | Pro | Thr | Glu | Cys | Ala | Pro | Pro | Gly | Pro | Ala | Asn | Cys | Phe | Phe |

| | 35 | | | | | 40 | | | | | 45 | | | | |
|-----------|-----------|------------|------------|-----------|-----------|-----------|------------|------------|-----------|-----------|-----------|------------|------------|-----------|-----------|
| Asn | Phe 50 | Phe | Phe | Phe | Phe | Phe 55 | Phe | Leu | Val | Glu | Thr 60 | Gly | Ser | Pro | Ser |
| Val 65 | Ala | Gln | Asp | Gly | Leu 70 | Glu | Leu | Leu | Gly | Ser 75 | Ser | Asn | Pro | Pro | Thr 80 |
| Leu | Ala | Ser | Gln | Ser 85 | Ala | Glu | Ile | Thr | Gly 90 | Met | Ser | His | Tyr | Ala 95 | Gln |
| Pro | Glu | Gln | Asp 100 | Asp | Leu | Asn | Leu | Ile 105 | Asn | Ser | Thr | Pro | Lys 110 | Gln | Gln |
| Leu | Ser | Leu 115 | Ser | Gln | Gly | Cys | Gln 120 | Gly | Gly | Leu | Cys | Glu 125 | Gly | Lys | Asp |

<210> 311
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 <212> PRT
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<400> 311

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| Trp 1 | Val | Ala | Gly | Arg 5 | Arg | His | Leu | Leu | Ser 10 | Val | Gln | Thr | Lys | Ser 15 | Leu |
| Gln | Val | Leu | Gly 20 | Leu | Asp | Leu | Cys | Val 25 | Thr | Pro | Glu | Ser | Gln 30 | Cys | Ile |
| Arg | Tyr | Leu 35 | Tyr | Lys | Lys | Leu | Val 40 | Trp | Phe | Leu | Ser | Ala 45 | Lys | Gly | Lys |
| Thr | Cys 50 | Phe | Leu | Asn | Leu | Leu 55 | Ser | Asp | Asn | Lys | Val 60 | Thr | Pro | Trp | Lys |
| Arg 65 | Arg | Thr | Ser | Glu | Lys 70 | Tyr | Gly | Val | Thr | Thr 75 | Trp | Ala | Phe | Pro | Val 80 |
| Leu | Ala | Ala | Cys | Phe 85 | Gly | Lys | Leu | Gln | Cys 90 | Arg | Leu | Gln | Arg | Ala 95 | Val |

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<400> 312

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| Ile 1 | Ser | Thr | Ser | Ile 5 | Ala | Ala | Leu | Trp | Leu 10 | Pro | Gly | Gly | Gln | Asp 15 | Ala |
| Gly | Gly | Gly | Ala 20 | Leu | Trp | Pro | Leu | Cys 25 | Gly | Ser | Arg | Gly | Leu 30 | Cys | Val |
| Ser | Asp | Arg 35 | Phe | Pro | Gly | Asn | Phe 40 | Arg | Ala | Arg | Leu | Thr 45 | Ser | Trp | Lys |
| Phe | Lys 50 | Tyr | Ser | Ile | Ala | Leu 55 | Glu | Phe | | | | | | | |

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 <211> 52

<212> PRT
<213> homo sapiens

<400> 313

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| Ser 1 | Ala | His | Gln | Leu 5 | Gln | His | Cys | Gly | Tyr 10 | Gln | Gly | Val | Arg | Met 15 | Arg |
| Ala | Val | Glu | Pro 20 | Ser | Gly | Leu | Cys | Val 25 | Val | Ala | Glu | Asp | Ser 30 | Val | Ser |
| Ala | Thr | Val 35 | Phe | Arg | Glu | Thr | Ser 40 | Gly | Arg | Asp | Ser | His 45 | Leu | Gly | Asn |
| Ser | Asn 50 | Thr | Gln | | | | | | | | | | | | |

<210> 314
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<212> PRT
<213> homo sapiens

<400> 314

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|----------|-----|-----------|-----------|----------|-----|-----|-----------|-----------|-----------|-----|-----|-----|-----------|-----------|-----|
| Asn 1 | Ser | Arg | Ala | Ile 5 | Glu | Tyr | Leu | Asn | Phe 10 | Gln | Asp | Val | Ser | Leu 15 | Ala |
| Arg | Lys | Phe | Pro 20 | Gly | Lys | Arg | Ser | Leu 25 | Thr | Gln | Ser | Pro | Arg 30 | Leu | Pro |
| His | Lys | Gly 35 | Gln | Arg | Ala | Pro | Pro 40 | Pro | Ala | Ser | | | | | |

<210> 315
<211> 247
<212> PRT
<213> homo sapiens

<400> 315

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|-----------|-----------|------------|------------|-----------|-----------|-----------|------------|------------|-----------|-----------|-----------|------------|------------|-----------|-----------|
| Gly 1 | Ser | Ser | Gly | Ser 5 | Arg | Phe | Glu | Val | Val 10 | Val | Val | Leu | Glu | Glu 15 | Arg |
| Arg | Gly | Gly | Arg 20 | Gly | Arg | Gly | Met | Gly 25 | Arg | Gly | Asp | Gly | Phe 30 | Asp | Ser |
| Arg | Gly | Lys 35 | Arg | Glu | Phe | Asp | Arg 40 | His | Ser | Gly | Ser | Asp 45 | Arg | Ser | Gly |
| Leu | Lys 50 | His | Glu | Asp | Lys | Arg 55 | Gly | Gly | Ser | Gly | Ser 60 | His | Asn | Trp | Gly |
| Thr 65 | Val | Lys | Asp | Glu | Leu 70 | Thr | Glu | Ser | Pro | Lys 75 | Tyr | Ile | Gln | Lys | Gln 80 |
| Ile | Ser | Tyr | Asn | Tyr 85 | Ser | Asp | Leu | Asp | Gln 90 | Ser | Asn | Val | Thr | Glu 95 | Glu |
| Thr | Pro | Glu | Gly 100 | Glu | Glu | His | His | Pro 105 | Val | Ala | Asp | Thr | Glu 110 | Asn | Lys |
| Glu | Asn | Glu 115 | Val | Glu | Glu | Val | Lys 120 | Glu | Glu | Gly | Pro | Lys 125 | Glu | Met | Thr |

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|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Asp | Glu | Trp | Lys | Ala | Ile | Gln | Asn | Lys | Asp | Arg | Ala | Lys | Val | Glu |
| | 130 | | | | | 135 | | | | | 140 | | | | |
| Phe | Asn | Ile | Arg | Lys | Pro | Asn | Glu | Gly | Ala | Asp | Gly | Gln | Trp | Lys | Lys |
| 145 | | | | | 150 | | | | | 155 | | | | | 160 |
| Gly | Phe | Val | Leu | His | Lys | Ser | Lys | Ser | Glu | Glu | Ala | His | Ala | Glu | Asp |
| | | | | 165 | | | | | 170 | | | | | 175 | |
| Ser | Val | Met | Asp | His | His | Phe | Arg | Lys | Pro | Ala | Asn | Asp | Ile | Thr | Ser |
| | | | 180 | | | | | 185 | | | | | 190 | | |
| Gln | Leu | Glu | Ile | Asn | Phe | Gly | Asp | Leu | Gly | Arg | Pro | Gly | Arg | Gly | Gly |
| | | 195 | | | | | 200 | | | | | 205 | | | |
| Arg | Gly | Gly | Arg | Gly | Gly | Arg | Gly | Arg | Gly | Gly | Arg | Pro | Asn | Arg | Gly |
| | 210 | | | | | 215 | | | | | 220 | | | | |
| Ser | Arg | Thr | Asp | Lys | Ser | Ser | Ala | Ser | Ala | Pro | Asp | Val | Asp | Asp | Pro |
| 225 | | | | | 230 | | | | | 235 | | | | | 240 |
| Glu | Ala | Phe | Pro | Ala | Leu | Ala | | | | | | | | | |
| | | | | 245 | | | | | | | | | | | |

<210> 316
 <211> 75
 <212> PRT
 <213> homo sapiens

<400> 316

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|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Phe | Met | Lys | Asn | Lys | Ser | Leu | Leu | Pro | Leu | Pro | Ile | Ser | Thr | Phe | Ile |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Trp | Phe | Ser | Asp | Ile | Lys | Phe | Tyr | Phe | Cys | Pro | Val | Leu | Ile | Leu | Asn |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Ser | Leu | Pro | Leu | Ile | Gln | Ser | His | Leu | Phe | Trp | Thr | Leu | Leu | Phe | Tyr |
| | | 35 | | | | | 40 | | | | | 45 | | | |
| Leu | Phe | Asn | Phe | Ile | Leu | Leu | Ile | Phe | Ser | Val | Cys | His | Trp | Met | Met |
| | 50 | | | | | 55 | | | | | 60 | | | | |
| Phe | Phe | Thr | Phe | Arg | Cys | Phe | Leu | Ser | His | Ile | | | | | |
| 65 | | | | | 70 | | | | | 75 | | | | | |

<210> 317
 <211> 78
 <212> PRT
 <213> homo sapiens

<400> 317

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|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ser | Phe | Gly | Ile | Leu | Lys | His | Ala | Lys | Ala | Leu | Asn | Arg | Arg | Val | His |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Lys | Gly | Thr | Arg | Val | Val | Leu | Trp | His | Pro | Val | Lys | Pro | Glu | Leu | Gly |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Met | Pro | Leu | Gly | His | Pro | His | Gln | Glu | Gln | Lys | His | Leu | Thr | Cys | Arg |
| | | 35 | | | | | 40 | | | | | 45 | | | |

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|-----------|-----------|-----|-----|-----|-----------|-----------|-----|-----|-----|-----------|-----------|-----|-----|-----|-----|
| Ser | Cys 50 | Cys | His | Gly | Leu | Gly 55 | Ala | His | His | Ala | His 60 | Val | His | Leu | Val |
| Leu 65 | Pro | Cys | Arg | His | Val 70 | Leu | Gly | Gly | Gln | Gly 75 | Leu | Gln | Asn | | |

<210> 318
 <211> 235
 <212> PRT
 <213> homo sapiens

<400> 318

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|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Leu 1 | His | Leu | Gly | Ala 5 | Gln | Arg | Ala | Leu | Ala 10 | Pro | Gly | Leu | Phe | Arg 15 | Leu |
| Gln | Gly | Met | Leu 20 | Arg | Ala | Leu | Leu | Gly 25 | Arg | Gln | Leu | Phe | Arg 30 | Ala | Arg |
| Gly | Pro | Pro 35 | Val | Val | Arg | Glu | Pro 40 | Leu | Pro | Arg | Thr | Thr 45 | Arg | Leu | Ala |
| Val | Arg 50 | His | Val | Trp | Pro | Pro 55 | Cys | Asp | Arg | Pro | Leu 60 | Arg | Val | Gly | Pro |
| Gly 65 | Ser | Pro | Leu | Pro | Pro 70 | Gly | Pro | Leu | His | Met 75 | His | Leu | Leu | Pro | Ala 80 |
| Pro | Ala | His | Gln | Gly 85 | Val | Leu | Pro | Gly | Ala 90 | Arg | Arg | Gln | Ala | Leu 95 | Leu |
| Pro | Ala | Leu | Leu 100 | Pro | Glu | Ala | Leu | Arg 105 | Leu | Thr | Ala | Arg | Ser 110 | Ala | Arg |
| Pro | Leu | Pro 115 | Arg | Arg | Pro | Arg | Pro 120 | Pro | Gly | Lys | Ala | Gly 125 | Ser | Ser | Arg |
| Pro | Arg 130 | Gly | Leu | Ala | Leu | Arg 135 | Ala | Gly | Gly | Pro | Thr 140 | His | Trp | Arg | Ala |
| Pro 145 | Pro | Leu | Arg | Tyr | Tyr 150 | Glu | Ser | Ser | Gly | Val 155 | Lys | Phe | Arg | Asn | Gly 160 |
| Pro | Ala | Arg | Pro | Lys 165 | Pro | Thr | Arg | Pro | Gln 170 | Ser | Gly | Leu | His | Thr 175 | Asp |
| Lys | Asn | Ser | Arg 180 | Ala | Gly | Leu | His | Ser 185 | Ile | Pro | Thr | Leu | Glu 190 | Gly | Ala |
| Pro | Leu | Leu 195 | Gly | Glu | Gly | Pro | Cys 200 | Asn | Ser | Ser | Glu | Ser 205 | Glu | Ala | Arg |
| Pro | Gly 210 | Arg | Pro | Cys | Ser | Leu 215 | His | Pro | His | Cys | Ser 220 | Val | His | Phe | Phe |
| Tyr 225 | Leu | His | Lys | His | Thr 230 | His | Ser | Thr | Ser | Lys 235 | | | | | |

<210> 319
 <211> 478
 <212> PRT
 <213> homo sapiens

<400> 319

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|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Gly 1 | Ser | Arg | Pro | Pro 5 | Pro | Cys | Ser | Pro | Arg 10 | Ala | Thr | Gly | Pro | Arg 15 | Pro |
| Ala | Met | Glu | Asp 20 | Leu | Asp | Ala | Leu | Leu 25 | Ser | Asp | Leu | Glu | Thr 30 | Thr | Thr |
| Ser | His | Met 35 | Pro | Arg | Ser | Gly | Ala 40 | Pro | Lys | Glu | Arg | Pro 45 | Ala | Glu | Pro |
| Leu | Thr 50 | Pro | Pro | Pro | Ser | Tyr 55 | Gly | His | Gln | Pro | Gln 60 | Thr | Gly | Ser | Gly |
| Glu 65 | Ser | Ser | Gly | Ala | Ser 70 | Gly | Asp | Lys | Asp | His 75 | Leu | Tyr | Ser | Thr | Val 80 |
| Cys | Lys | Pro | Arg | Ser 85 | Pro | Lys | Pro | Ala | Ala 90 | Pro | Ala | Ala | Pro | Pro 95 | Phe |
| Ser | Ser | Ser | Ser 100 | Gly | Val | Leu | Gly | Thr 105 | Gly | Leu | Cys | Glu | Leu 110 | Asp | Arg |
| Leu | Leu | Gln 115 | Glu | Leu | Asn | Ala | Thr 120 | Gln | Phe | Asn | Ile | Thr 125 | Asp | Glu | Ile |
| Met | Ser 130 | Gln | Phe | Pro | Ser | Ser 135 | Lys | Val | Ala | Ser | Gly 140 | Glu | Gln | Lys | Glu |
| Asp 145 | Gln | Ser | Glu | Asp | Lys 150 | Lys | Arg | Pro | Ser | Leu 155 | Pro | Ser | Ser | Pro | Ser 160 |
| Pro | Gly | Leu | Pro | Lys 165 | Ala | Ser | Ala | Thr | Ser 170 | Ala | Thr | Leu | Glu | Leu 175 | Asp |
| Arg | Leu | Met | Ala 180 | Ser | Leu | Ser | Asp | Phe 185 | Arg | Val | Gln | Asn | His 190 | Leu | Pro |
| Ala | Ser | Gly 195 | Pro | Thr | Gln | Pro | Pro 200 | Val | Val | Ser | Ser | Thr 205 | Asn | Glu | Gly |
| Ser | Pro 210 | Ser | Pro | Pro | Glu | Pro 215 | Thr | Gly | Lys | Gly | Ser 220 | Leu | Asp | Thr | Met |
| Leu 225 | Gly | Leu | Leu | Gln | Ser 230 | Asp | Leu | Ser | Arg | Arg 235 | Gly | Val | Pro | Thr | Gln 240 |
| Ala | Lys | Gly | Leu | Cys 245 | Gly | Ser | Cys | Asn | Lys 250 | Pro | Ile | Ala | Gly | Gln 255 | Val |
| Val | Thr | Ala | Leu 260 | Gly | Arg | Ala | Trp | His 265 | Pro | Glu | His | Phe | Val 270 | Cys | Gly |
| Gly | Cys | Ser 275 | Thr | Ala | Leu | Gly | Gly 280 | Ser | Ser | Phe | Phe | Glu 285 | Lys | Asp | Gly |
| Ala | Pro 290 | Phe | Cys | Pro | Glu | Cys 295 | Tyr | Phe | Glu | Arg | Phe 300 | Ser | Pro | Arg | Cys |
| Gly 305 | Phe | Cys | Asn | Gln | Pro 310 | Ile | Arg | His | Lys | Met 315 | Val | Thr | Ala | Leu | Gly 320 |
| Thr | His | Trp | His | Pro | Glu | His | Phe | Cys | Cys | Val | Ser | Cys | Gly | Glu | Pro |

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| | | | | 325 | | | | | 330 | | | | | 335 | |
| Phe | Gly | Asp | Glu 340 | Gly | Phe | His | Glu | Arg 345 | Glu | Gly | Arg | Pro | Tyr 350 | Cys | Arg |
| Arg | Asp | Phe 355 | Leu | Gln | Leu | Phe | Ala 360 | Pro | Arg | Cys | Gln | Gly 365 | Cys | Gln | Gly |
| Pro | Ile 370 | Leu | Asp | Asn | Tyr | Ile 375 | Ser | Ala | Leu | Ser | Ala 380 | Leu | Trp | His | Pro |
| Asp 385 | Cys | Phe | Val | Cys | Arg 390 | Glu | Cys | Phe | Ala | Pro 395 | Phe | Ser | Gly | Gly | Ser 400 |
| Phe | Phe | Glu | His | Glu 405 | Gly | Arg | Pro | Leu | Cys 410 | Glu | Asn | His | Phe | His 415 | Ala |
| Arg | Arg | Gly | Ser 420 | Leu | Cys | Ala | Thr | Cys 425 | Gly | Leu | Pro | Val | Thr 430 | Gly | Arg |
| Cys | Val | Ser 435 | Ala | Leu | Gly | Arg | Arg 440 | Phe | His | Pro | Asp | His 445 | Phe | Thr | Cys |
| Thr | Phe 450 | Cys | Leu | Arg | Pro | Leu 455 | Thr | Lys | Gly | Ser | Phe 460 | Gln | Glu | Arg | Ala |
| Gly 465 | Lys | Pro | Tyr | Cys | Gln 470 | Pro | Cys | Phe | Leu | Lys 475 | Leu | Phe | Gly | | |
| <210> | 320 | | | | | | | | | | | | | | |
| <211> | 285 | | | | | | | | | | | | | | |
| <212> | PRT | | | | | | | | | | | | | | |
| <213> | homo sapiens | | | | | | | | | | | | | | |
| <400> | 320 | | | | | | | | | | | | | | |
| Glu 1 | Gln | Gly | Leu | Gly 5 | Val | Trp | Arg | Thr | Arg 10 | Leu | Phe | Arg | Glu | Gly 15 | Ala |
| Ala | Ser | Gly | Gly 20 | Glu | Gly | Glu | Pro | Ser 25 | Gly | Leu | Ser | Ala | Glu 30 | Glu | Leu |
| Gln | Glu | Ala 35 | Gly | Leu | Ala | Val | Gly 40 | Leu | Ala | Gly | Ala | Leu 45 | Leu | Glu | Gly |
| Pro | Leu 50 | Gly | Glu | Arg | Ala | Gln 55 | Ala | Glu | Gly | Ala | Cys 60 | Glu | Val | Val | Arg |
| Val 65 | Glu | Ala | Ala | Thr | Gln 70 | Gly | Arg | His | Ala | Ala 75 | Ala | Gly | His | Arg | Glu 80 |
| Ala | Thr | Arg | Gly | Ala 85 | Gln | Arg | Ala | Ala | Ser 90 | Cys | Val | Glu | Val | Val 95 | Leu |
| Ala | Gln | Arg | Ala 100 | Ala | Leu | Val | Leu | Glu 105 | Lys | Ala | Ala | Ser | Arg 110 | Glu | Gly |
| Arg | Glu | Ala 115 | Phe | Pro | Ala | Asp | Glu 120 | Thr | Val | Arg | Val | Pro 125 | Glu | Arg | Ala |
| Glu | Arg 130 | Arg | Asp | Val | Val | Ile 135 | Gln | Asp | Gly | Ala | Leu 140 | Ala | Ala | Leu | Ala |

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|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Ala 145 | Arg | Gly | Glu | Gln | Leu 150 | Gln | Glu | Val | Pro | Ala 155 | Ala | Val | Gly | Ala | Ala 160 |
| Leu | Ala | Leu | Val | Glu 165 | Thr | Leu | Ile | Ser | Glu 170 | Gly | Leu | Pro | Ala | Thr 175 | Asp |
| Ala | Ala | Glu | Met 180 | Leu | Trp | Val | Pro | Val 185 | Ser | Ala | Gln | Gly | Gly 190 | His | His |
| Leu | Val | Ser 195 | Asp | Gly | Leu | Val | Ala 200 | Glu | Ala | Thr | Ser | Trp 205 | Arg | Glu | Ala |
| Leu | Lys 210 | Val | Ala | Leu | Gly | Ala 215 | Glu | Gly | Gly | Ser | Ile 220 | Leu | Leu | Glu | Glu |
| Ala 225 | Ala | Ala | Ser | Gln | Gly 230 | Gly | Gly | Thr | Ala | Ser 235 | Ala | Asn | Glu | Val | Leu 240 |
| Gly | Val | Pro | Gly | Ala 245 | Ala | Gln | Ser | Arg | His 250 | His | Leu | Pro | Ser | Asn 255 | Arg |
| Phe | Ile | Ala | Gly 260 | Ala | Thr | Glu | Ala | Phe 265 | Gly | Leu | Gly | Gly | Asn 270 | Thr | Pro |
| Ala | Ala | Glu 275 | Val | Gly | Leu | Gln | Gln 280 | Pro | Gln | His | Gly | Val 285 | | | |

<210> 321
 <211> 99
 <212> PRT
 <213> homo sapiens
 <400> 321

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|-----------|-----|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Gly 1 | Leu | His | Leu | Gln 5 | Pro | Leu | Leu | Trp | Arg 10 | Gln | Ser | Thr | Glu | Glu 15 | Glu |
| Val | Arg | Glu | Glu 20 | Gly | Gln | Ala | Leu | Thr 25 | Glu | Pro | Lys | Ser | Cys 30 | Gly | Ala |
| Gln | Gly | Gly 35 | Ala | Gln | His | Arg | Gly 40 | Leu | Thr | Pro | Cys | Pro 45 | Thr | Gly | Asn |
| Gly 50 | Leu | Gly | Leu | Ala | Gln | Pro 55 | Lys | Ile | Pro | Ala | Leu 60 | Ser | Asn | Ser | Trp |
| Arg 65 | Val | Asp | Ser | Val | Leu 70 | Ala | Cys | Leu | Val | Ser 75 | Ser | Asp | Ile | Phe | His 80 |
| Thr | Val | Glu | Gln | Asn 85 | His | Gln | Pro | Cys | Thr 90 | Asp | Val | Thr | Leu | Cys 95 | Arg |
| Lys | Arg | Pro | | | | | | | | | | | | | |

<210> 322
 <211> 99
 <212> PRT
 <213> homo sapiens
 <400> 322

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|----------|-----|-----|-----|----------|-----|-----|-----|-----|-----------|-----|-----|-----|-----|-----------|-----|
| Glu 1 | Thr | Gln | Ser | Ser 5 | Gln | Arg | Leu | Thr | Cys 10 | Pro | Arg | Ser | Leu | Gly 15 | Leu |
|----------|-----|-----|-----|----------|-----|-----|-----|-----|-----------|-----|-----|-----|-----|-----------|-----|

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|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Asp | Leu | Ser | Leu 20 | Arg | Leu | Arg | Leu | Gln 25 | Asn | Pro | His | Ser | Ile 30 | Cys | Tyr |
| Ile | Ser | Gln 35 | Gly | Trp | Gly | Gln | Gly 40 | Ser | Cys | Glu | Gln | Lys 45 | Glu | Lys | Tyr |
| Gln | Leu 50 | Leu | Lys | Gly | Leu | Gly 55 | Phe | Val | Gly | Arg | Ala 60 | Arg | Gln | Gly | Gln |
| Arg 65 | Gly | Ile | Gln | Asn | Lys 70 | Gly | Ala | Ser | Thr | Ser 75 | Ala | Trp | Asp | Gly | Pro 80 |
| Ile | His | Ser | Gly | Arg 85 | Gly | Cys | Gly | Val | Ser 90 | Pro | Val | Leu | Arg | Asn 95 | His |

Leu Ala Ser

<210> 323
 <211> 83
 <212> PRT
 <213> homo sapiens

<400> 323

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|-----------|-----|-----------|-----------|----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Ser 1 | Asn | Pro | Lys | Ala 5 | Pro | Val | Ser | Met | Trp 10 | Val | Lys | Gly | Pro | Thr 15 | Met |
| Gly | Thr | Tyr | Thr 20 | Gln | Glu | Asp | Glu | Ser 25 | Ser | Leu | Ala | Ser | Glu 30 | Ser | Asp |
| Cys | Leu | Pro 35 | Gln | Thr | Pro | Pro | Gln 40 | Asn | Arg | Leu | Leu | Ser 45 | His | Leu | Pro |
| Leu 50 | His | Ser | Asp | Lys | Thr | Gln 55 | Ala | His | Ile | Pro | Gly 60 | Pro | Gly | Val | Phe |
| Ala 65 | Cys | Ile | Cys | Ile | Asp 70 | Gly | Asn | Ala | Gly | Pro 75 | Ala | Lys | Ala | Phe | Phe 80 |

Tyr Ile Lys

<210> 324
 <211> 111
 <212> PRT
 <213> homo sapiens

<400> 324

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|-----------|-----------|-----------|-----------|----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Val 1 | Phe | Pro | Thr | Val 5 | Leu | Arg | Gly | Val | Leu 10 | Val | Pro | Ser | Ser | Val 15 | Thr |
| Ser | Lys | Pro | Gly 20 | Leu | Ile | Val | Pro | Ile 25 | Gly | Asp | Glu | Gly | Gly 30 | Met | Arg |
| Arg | Ser | His 35 | Leu | Gln | Leu | Leu | Ser 40 | Val | Glu | Arg | Thr | Ser 45 | Gly | Thr | Glu |
| Lys | Asn 50 | Arg | Gly | Pro | His | Gly 55 | Ser | Leu | Glu | Gly | Arg 60 | Gly | Thr | Arg | Val |
| Gly 65 | Glu | Leu | Ile | Ala | Glu 70 | Arg | Arg | Asp | Val | Gln 75 | Arg | Pro | Ser | Ala | Pro 80 |

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|-----|-----|-----|------------|-----------|-----|-----|-----|------------|-----------|-----|-----|-----|------------|-----------|-----|
| Leu | Ser | Trp | Asp | Val 85 | Asn | Arg | Ile | Phe | Pro 90 | Ser | Thr | Pro | Ser | Leu 95 | Pro |
| Pro | Val | Leu | Pro 100 | Leu | Phe | Phe | Phe | Pro 105 | Ser | Ile | Lys | Arg | Cys 110 | Ile | |

<210> 325
 <211> 272
 <212> PRT
 <213> homo sapiens

<400> 325

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|------------|-----------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Ser 1 | Ser | Arg | Ala | Ser 5 | Gly | Ile | Thr | Arg | Ala 10 | Ala | Arg | Pro | Cys | Pro 15 | Ala |
| Lys | Asn | Glu | Gly 20 | Pro | Ser | Lys | Ala | Phe 25 | Val | Asn | Cys | Asp | Glu 30 | Asn | Ser |
| Arg | Leu | Val 35 | Ser | Leu | Thr | Leu | Asn 40 | Leu | Val | Thr | Arg | Ala 45 | Asp | Glu | Gly |
| Trp | Tyr 50 | Trp | Cys | Gly | Val | Lys 55 | Gln | Gly | His | Phe | Tyr 60 | Gly | Glu | Thr | Ala |
| Ala 65 | Val | Tyr | Val | Ala | Val 70 | Glu | Glu | Arg | Lys | Ala 75 | Ala | Gly | Ser | Arg | Asp 80 |
| Val | Ser | Leu | Ala | Lys 85 | Ala | Asp | Ala | Ala | Pro 90 | Asp | Glu | Lys | Val | Leu 95 | Asp |
| Ser | Gly | Phe | Arg 100 | Glu | Ile | Glu | Asn | Lys 105 | Ala | Ile | Gln | Asp | Pro 110 | Arg | Leu |
| Phe | Ala | Glu 115 | Glu | Lys | Ala | Val | Ala 120 | Asp | Thr | Arg | Asp | Gln 125 | Ala | Asp | Gly |
| Ser 130 | Arg | Ala | Ser | Val | Asp | Ser 135 | Gly | Ser | Ser | Glu | Glu 140 | Gln | Gly | Gly | Ser |
| Ser 145 | Arg | Ala | Leu | Val | Ser 150 | Thr | Leu | Val | Pro | Leu 155 | Gly | Leu | Val | Leu | Ala 160 |
| Val | Gly | Ala | Val | Ala 165 | Val | Gly | Val | Ala | Arg 170 | Ala | Arg | His | Arg | Lys 175 | Asn |
| Val | Asp | Arg | Val 180 | Ser | Ile | Arg | Ser | Tyr 185 | Arg | Thr | Asp | Ile | Ser 190 | Met | Ser |
| Asp | Phe | Glu 195 | Asn | Ser | Arg | Glu | Phe 200 | Gly | Ala | Asn | Asp | Asn 205 | Met | Gly | Ala |
| Ser 210 | Ser | Ile | Thr | Gln | Glu | Thr 215 | Ser | Leu | Gly | Gly | Lys 220 | Glu | Glu | Phe | Val |
| Ala 225 | Thr | Thr | Glu | Ser | Thr 230 | Thr | Glu | Thr | Lys | Glu 235 | Pro | Lys | Lys | Ala | Lys 240 |
| Arg | Ser | Ser | Lys | Glu 245 | Glu | Ala | Glu | Met | Ala 250 | Tyr | Lys | Asp | Phe | Leu 255 | Leu |
| Gln | Ser | Ser | Thr | Val | Ala | Ala | Glu | Ala | Gln | Asp | Gly | Pro | Gln | Glu | Ala |

260

265

270

<210> 326
 <211> 241
 <212> PRT
 <213> homo sapiens

<400> 326

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|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Thr 1 | Leu | Val | Phe | Gly 5 | Arg | Leu | Arg | Thr | Lys 10 | Pro | Phe | Arg | Ile | Pro 15 | Gly |
| Phe | Leu | Gln | Arg 20 | Lys | Arg | Arg | Trp | Gln 25 | Ile | Gln | Glu | Ile | Lys 30 | Pro | Met |
| Gly | Ala | Glu 35 | His | Leu | Trp | Ile | Pro 40 | Ala | Ala | Leu | Arg | Asn 45 | Lys | Val | Glu |
| Ala | Pro 50 | Glu | Arg | Trp | Ser | Pro 55 | Pro | Trp | Cys | Pro | Trp 60 | Ala | Trp | Cys | Trp |
| Gln 65 | Trp | Glu | Pro | Trp | Leu 70 | Trp | Gly | Trp | Pro | Glu 75 | Pro | Gly | Thr | Gly | Arg 80 |
| Thr | Ser | Thr | Glu | Phe 85 | Gln | Ser | Glu | Ala | Thr 90 | Gly | Gln | Thr | Leu | Ala 95 | Cys |
| Gln | Thr | Ser | Arg 100 | Thr | Pro | Gly | Asn | Leu 105 | Glu | Pro | Met | Thr | Thr 110 | Trp | Glu |
| Pro | Leu | Arg 115 | Ser | Leu | Arg | Arg | His 120 | Pro | Ser | Glu | Glu | Lys 125 | Lys | Ser | Leu |
| Leu | Pro 130 | Pro | Leu | Arg | Ala | Pro 135 | Gln | Arg | Pro | Lys | Asn 140 | Pro | Arg | Arg | Gln |
| Lys 145 | Gly | His | Pro | Arg | Arg 150 | Lys | Pro | Arg | Trp | Pro 155 | Thr | Lys | Thr | Ser | Cys 160 |
| Ser | Ser | Pro | Ala | Pro 165 | Trp | Pro | Pro | Arg | Pro 170 | Arg | Thr | Ala | Pro | Arg 175 | Lys |
| Pro | Arg | Arg | Cys 180 | Arg | Arg | Leu | Leu | Pro 185 | Ala | Pro | Met | Thr | Ile 190 | Thr | Phe |
| Arg | Ile | Met 195 | Ser | Ile | Leu | Gly | Pro 200 | Ser | Ala | Pro | Gly | Asp 205 | Pro | Thr | Pro |
| Cys | Ser 210 | Asn | Thr | Cys | Leu | Gly 215 | Phe | Ser | Tyr | Cys | Pro 220 | Gln | Arg | Arg | Ala |
| Gly 225 | Pro | Leu | Leu | Ser | Asp 230 | Ile | Lys | Ala | Trp | Pro 235 | Asn | Cys | Ser | Tyr | Trp 240 |
| Gly | | | | | | | | | | | | | | | |

<210> 327
 <211> 121
 <212> PRT
 <213> homo sapiens

<400> 327

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|-----------|-----------|------------|------------|-----------|-----------|-----------|------------|------------|-----------|-----------|-----------|-----------|------------|-----------|-----------|
| Ala 1 | Val | Val | Arg | Val 5 | Thr | Trp | Tyr | Lys | Gly 10 | Glu | Gly | Ile | Thr | Leu 15 | Pro |
| Pro | Val | Leu | Thr 20 | Pro | Ala | Leu | Val | Arg 25 | Gly | Glu | Ser | Ile | Pro 30 | Ile | Arg |
| Leu | Phe | Leu 35 | Ala | Gly | Tyr | Glu | Leu 40 | Thr | Pro | Thr | Met | Arg 45 | Asp | Ile | Asn |
| Lys | Lys 50 | Phe | Ser | Val | Arg | Tyr 55 | Tyr | Leu | Asn | Leu | Val 60 | Leu | Ile | Asp | Glu |
| Glu 65 | Glu | Arg | Arg | Tyr | Phe 70 | Lys | Gln | Gln | Glu | Val 75 | Val | Leu | Trp | Arg | Lys 80 |
| Gly | Asp | Ile | Val | Arg 85 | Lys | Ser | Met | Ser | His 90 | Gln | Ala | Ala | Ile | Ala 95 | Ser |
| Gln | Arg | Phe | Glu 100 | Gly | Thr | Thr | Ser | Leu 105 | Gly | Glu | Val | Arg | Thr 110 | Pro | Ser |
| Gln | Leu | Ser 115 | Asp | Asn | Asn | Cys | Arg 120 | Gln | | | | | | | |

<210> 328
 <211> 140
 <212> PRT
 <213> homo sapiens

<400> 328

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|-----------|------------|------------|------------|-----------|-----------|------------|------------|------------|-----------|-----------|------------|------------|------------|-----------|-----------|
| Gly 1 | Glu | Thr | Arg | Val 5 | His | Ser | Gln | Gln | Gly 10 | Gly | Gly | Ile | Lys | Ala 15 | Pro |
| Ser | Trp | Asp | Trp 20 | Phe | Phe | Arg | Glu | Pro 25 | Gly | Pro | Leu | Val | Lys 30 | Gly | Leu |
| Leu | Gly | His 35 | Val | Lys | Gln | Tyr | Leu 40 | Glu | Gln | Pro | Arg | Pro 45 | Trp | Gly | Tyr |
| Gln | Val 50 | Glu | Arg | Arg | Glu | Gly 55 | Arg | Arg | Leu | Pro | Cys 60 | Thr | His | Leu | Pro |
| Trp 65 | Trp | Ala | Gly | Phe | Ser 70 | Leu | Leu | Gly | Ser | Thr 75 | Leu | Pro | Pro | Ser | Val 80 |
| His | Asp | Thr | Asp | Pro 85 | Arg | Ala | Ser | Pro | Cys 90 | Pro | Arg | Pro | Ser | Tyr 95 | Arg |
| Leu | Leu | Phe | Gln 100 | Asp | Ile | Thr | Asp | Asn 105 | Pro | Glu | Arg | Met | Glu 110 | Lys | Gly |
| Gly | Ala | Trp 115 | Val | Pro | Ala | Val | Ser 120 | Gly | Gln | Lys | Glu | Val 125 | Ala | Cys | Gly |
| Asn | Leu 130 | Arg | Ser | Pro | His | Pro 135 | Arg | Phe | Pro | Lys | Arg 140 | | | | |

<210> 329
 <211> 127
 <212> PRT
 <213> homo sapiens

<400> 329

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|-----------|-----------|------------|------------|-----------|-----------|-----------|------------|------------|-----------|-----------|-----------|------------|------------|-----------|-----------|
| Val 1 | Phe | Pro | Cys | His 5 | Leu | Val | Gly | Ala | Gly 10 | Pro | Thr | Pro | Ala | Thr 15 | Thr |
| Ser | Gly | Thr | Ala 20 | Lys | Gly | Ser | Thr | Arg 25 | Cys | Asp | Tyr | Pro | Gly 30 | Pro | Cys |
| Trp | Gln | Leu 35 | Arg | Ile | Pro | Gly | Thr 40 | Cys | Ser | Asp | Pro | Val 45 | Ser | Gly | Ser |
| Ser | Glu 50 | Ser | Gln | Glu | Pro | Arg 55 | Met | Arg | Ala | Leu | Cys 60 | Ser | Pro | Ser | Ser |
| Lys 65 | Thr | Gln | Gly | Ser | Pro 70 | Pro | Arg | Lys | Gly | Ala 75 | His | Val | Pro | Gln | Arg 80 |
| Gly | Trp | Leu | Pro | Gly 85 | Cys | Tyr | Leu | Phe | Tyr 90 | Pro | Thr | Ser | Ala | Ala 95 | Glu |
| Ser | Gln | Gly | Glu 100 | Thr | Ala | Ser | His | Pro 105 | Lys | Pro | Leu | Gly | Phe 110 | Ser | Arg |
| Glu | Lys | Asn 115 | Leu | Ser | Gln | Lys | His 120 | Asp | Leu | Phe | Ser | Gly 125 | Cys | Lys | |

<210> 330

<211> 418

<212> PRT

<213> homo sapiens

<400> 330

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|------------|------------|------------|------------|-----------|------------|------------|------------|------------|-----------|------------|------------|------------|------------|-----------|------------|
| Gly 1 | Ser | Thr | Ser | Thr 5 | Lys | Asn | Thr | Lys | Ile 10 | Ser | Gln | Ala | Cys | Gly 15 | Val |
| Ile | Val | Glu | Leu 20 | Ile | Lys | Ser | Lys | Lys 25 | Met | Ala | Gly | Gly | Ala 30 | Val | Leu |
| Leu | Ala | Gly 35 | Pro | Pro | Gly | Thr | Gly 40 | Lys | Thr | Ala | Leu | Ala 45 | Leu | Ala | Ile |
| Ala | Gln 50 | Glu | Leu | Gly | Ser | Lys 55 | Val | Pro | Phe | Cys | Pro 60 | Met | Val | Gly | Ser |
| Glu 65 | Val | Tyr | Ser | Thr | Glu 70 | Ile | Lys | Lys | Thr | Glu 75 | Val | Leu | Met | Glu | Asn 80 |
| Phe | Arg | Arg | Ala | Ile 85 | Gly | Leu | Arg | Ile | Lys 90 | Glu | Thr | Lys | Glu | Val 95 | Tyr |
| Glu | Gly | Glu | Val 100 | Thr | Glu | Leu | Thr | Pro 105 | Cys | Glu | Thr | Glu | Asn 110 | Pro | Met |
| Gly | Gly | Tyr 115 | Gly | Lys | Thr | Ile | Ser 120 | His | Val | Ile | Ile | Gly 125 | Leu | Lys | Thr |
| Ala | Lys 130 | Gly | Thr | Lys | Gln | Leu 135 | Lys | Leu | Asp | Pro | Ser 140 | Ile | Phe | Glu | Ser |
| Leu 145 | Gln | Lys | Glu | Arg | Val 150 | Glu | Ala | Gly | Asp | Val 155 | Ile | Tyr | Ile | Glu | Ala 160 |

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|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Asn | Ser | Gly | Ala | Val 165 | Lys | Arg | Gln | Gly | Arg 170 | Cys | Asp | Thr | Tyr | Ala 175 | Thr |
| Glu | Phe | Asp | Leu 180 | Glu | Ala | Glu | Glu | Tyr 185 | Val | Pro | Leu | Pro | Lys 190 | Gly | Asp |
| Val | His | Lys 195 | Lys | Lys | Glu | Ile | Ile 200 | Gln | Asp | Val | Thr | Leu 205 | His | Asp | Leu |
| Asp | Val 210 | Ala | Asn | Ala | Arg | Pro 215 | Gln | Gly | Gly | Gln | Asp 220 | Ile | Leu | Ser | Met |
| Met 225 | Gly | Gln | Leu | Met | Lys 230 | Pro | Lys | Lys | Thr | Glu 235 | Ile | Thr | Asp | Lys | Leu 240 |
| Arg | Gly | Glu | Ile | Asn 245 | Lys | Val | Val | Asn | Lys 250 | Tyr | Ile | Asp | Gln | Gly 255 | Ile |
| Ala | Glu | Leu | Val 260 | Pro | Gly | Val | Leu | Phe 265 | Val | Asp | Glu | Val | His 270 | Met | Leu |
| Asp | Ile | Glu 275 | Cys | Phe | Thr | Tyr | Leu 280 | His | Arg | Ala | Leu | Glu 285 | Ser | Ser | Ile |
| Ala | Pro 290 | Ile | Val | Ile | Phe | Ala 295 | Ser | Asn | Arg | Gly | Asn 300 | Cys | Val | Ile | Arg |
| Gly 305 | Thr | Glu | Asp | Ile | Thr 310 | Ser | Pro | His | Gly | Ile 315 | Pro | Leu | Asp | Leu | Leu 320 |
| Asp | Arg | Val | Met | Ile 325 | Ile | Arg | Thr | Met | Leu 330 | Tyr | Thr | Pro | Gln | Glu 335 | Met |
| Lys | Gln | Ile | Ile 340 | Lys | Ile | Arg | Ala | Gln 345 | Thr | Glu | Gly | Ile | Asn 350 | Ile | Ser |
| Glu | Glu | Ala 355 | Leu | Asn | His | Leu | Gly 360 | Glu | Ile | Gly | Thr | Lys 365 | Thr | Thr | Leu |
| Arg | Tyr 370 | Ser | Val | Gln | Leu | Leu 375 | Thr | Pro | Ala | Asn | Leu 380 | Leu | Ala | Lys | Ile |
| Asn 385 | Gly | Lys | Asp | Ser | Ile 390 | Glu | Lys | Glu | His | Val 395 | Glu | Glu | Ile | Ser | Glu 400 |
| Leu | Phe | Tyr | Asp | Ala 405 | Lys | Ser | Ser | Ala | Lys 410 | Ile | Leu | Gly | Leu | Thr 415 | Arg |

Gln Gly

<210> 331

<211> 142

<212> PRT

<213> homo sapiens

<400> 331

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|----------|-----|-----|-----------|----------|-----|-----|-----|-----------|-----------|-----|-----|-----|-----------|-----------|-----|
| Val 1 | Pro | Gln | Cys | Gly 5 | Leu | Gly | Ala | Asn | Leu 10 | Pro | Gln | Val | Val | Gln 15 | Cys |
| Leu | Leu | Thr | Asp 20 | Val | Asp | Ser | Phe | Arg 25 | Leu | Gly | Thr | Asp | Phe 30 | Asn | Asp |

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|-----------|------------|------------|------------|-----------|-----------|------------|------------|------------|-----------|-----------|------------|------------|------------|-----------|-----------|
| Leu | Phe | His 35 | Phe | Leu | Trp | Ser | Ile 40 | Gln | His | Gly | Pro | Asp 45 | Tyr | His | His |
| Ser | Val 50 | Gln | Lys | Val | Lys | Arg 55 | Asp | Ala | Val | Arg | Gly 60 | Cys | Asp | Val | Leu |
| Ser 65 | Ala | Ser | Asp | Asp | Thr 70 | Val | Ala | Ser | Val | Gly 75 | Cys | Lys | Asp | Asp | Asp 80 |
| Gly | Ser | Asp | Arg | Arg 85 | Leu | Gln | Gly | Ala | Val 90 | Gln | Val | Gly | Glu | Ala 95 | Leu |
| Asn | Val | Gln | His 100 | Val | Asp | Leu | Ile | Asn 105 | Lys | Gln | His | Thr | Arg 110 | Asp | Gln |
| Leu | Ser | Asn 115 | Ala | Leu | Val | Asp | Val 120 | Leu | Val | His | His | Leu 125 | Ile | Asn | Leu |
| Pro | Ser 130 | Lys | Phe | Val | Cys | Asp 135 | Phe | Cys | Leu | Leu | Trp 140 | Leu | His | | |

<210> 332
 <211> 124
 <212> PRT
 <213> homo sapiens

<400> 332

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|-----------|-----------|------------|------------|-----------|-----------|-----------|------------|------------|-----------|-----------|-----------|-----------|------------|-----------|-----------|
| Leu 1 | Ala | His | His | Gly 5 | Gln | Asp | Ile | Leu | Ser 10 | Pro | Leu | Gly | Pro | Arg 15 | Ile |
| Ser | His | Ile | Gln 20 | Val | Met | Gln | Gly | His 25 | Ile | Leu | Asp | Asp | Phe 30 | Phe | Leu |
| Phe | Val | His 35 | Ile | Pro | Phe | Trp | Gln 40 | Gly | Asp | Ile | Leu | Phe 45 | Ser | Phe | Lys |
| Val | Glu 50 | Phe | Cys | Gly | Ile | Gly 55 | Ile | Thr | Pro | Ala | Leu 60 | Pro | Leu | His | Gly |
| Pro 65 | Thr | Val | Gly | Phe | Asn 70 | Val | Asn | His | Ile | Ser 75 | Ser | Phe | Tyr | Ser | Leu 80 |
| Phe | Leu | Gln | Thr | Phe 85 | Lys | Asn | Ala | Gly | Val 90 | Gln | Phe | Gln | Leu | Phe 95 | Gly |
| Ser | Phe | Gly | Cys 100 | Phe | Glu | Ser | Tyr | Asp 105 | His | Met | Ala | Asn | Gly 110 | Phe | Ala |
| Ile | Ser | Ser 115 | His | Gly | Ile | Leu | Cys 120 | Leu | Thr | Arg | Ser | | | | |

<210> 333
 <211> 176
 <212> PRT
 <213> homo sapiens

<400> 333

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|----------|-----|-----|-----|----------|-----|-----|-----|-----|-----------|-----|-----|-----|-----|-----------|-----|
| Gln 1 | Ala | Met | Gly | Lys 5 | Lys | Gln | Lys | Asn | Lys 10 | Ser | Glu | Asp | Ser | Thr 15 | Lys |
| Asp | Asp | Ile | Asp | Leu | Asp | Ala | Leu | Ala | Ala | Glu | Ile | Glu | Gly | Ala | Gly |

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|--------------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|--|--|
| Ala | Ala | Lys 35 | Glu | Gln | Glu | Pro | Gln 40 | Lys | Ser | Lys | Gly | Lys 45 | Lys | Lys | Lys | | |
| Glu | Lys 50 | Lys | Lys | Gln | Asp | Phe 55 | Asp | Glu | Asp | Asp | Ile 60 | Leu | Lys | Glu | Leu | | |
| Glu 65 | Glu | Leu | Ser | Leu | Glu 70 | Ala | Gln | Gly | Ile | Lys 75 | Ala | Asp | Arg | Glu | Thr 80 | | |
| Val | Ala | Val | Lys | Pro 85 | Thr | Glu | Asn | Asn | Glu 90 | Glu | Glu | Phe | Thr | Ser 95 | Lys | | |
| Asp | Lys | Lys | Lys 100 | Lys | Gly | Gln | Lys | Gly 105 | Lys | Lys | Gln | Ser | Phe 110 | Asp | Asp | | |
| Asn | Asp | Ser 115 | Glu | Glu | Leu | Glu | Asp 120 | Lys | Asp | Ser | Lys | Ser 125 | Lys | Lys | Thr | | |
| Ala | Lys 130 | Pro | Lys | Val | Glu | Met 135 | Tyr | Ser | Gly | Ser | Leu 140 | Thr | Asn | Phe | Leu | | |
| Lys 145 | Lys | Leu | Lys | Gly | Lys 150 | Leu | Lys | Asn | Gln | Ile 155 | Arg | Ser | Gly | Met | Gly 160 | | |
| Gln | Arg | Arg | Met | Arg 165 | Ile | Thr | Val | Lys | Lys 170 | Leu | Lys | Ser | Val | Gln 175 | Glu | | |
| <210> 334 | | | | | | | | | | | | | | | | | |
| <211> 193 | | | | | | | | | | | | | | | | | |
| <212> PRT | | | | | | | | | | | | | | | | | |
| <213> homo sapiens | | | | | | | | | | | | | | | | | |
| <400> 334 | | | | | | | | | | | | | | | | | |
| Arg 1 | Phe | Lys | Ile | Lys 5 | Lys | Asp | Cys | Lys | Thr 10 | Glu | Ser | Gly | Asn | Val 15 | Leu | | |
| Trp | Glu | Phe | Asn 20 | Lys | Leu | Pro | Lys | Lys 25 | Ala | Lys | Gly | Lys | Ala 30 | Gln | Lys | | |
| Ser | Asn | Lys 35 | Lys | Trp | Asp | Gly | Ser 40 | Glu | Glu | Asp | Glu | Asp 45 | Asn | Ser | Lys | | |
| Lys | Ile 50 | Lys | Glu | Arg | Ser | Arg 55 | Ile | Asn | Ser | Ser | Gly 60 | Glu | Ser | Gly | Asp | | |
| Glu 65 | Ser | Asp | Glu | Phe | Leu 70 | Gln | Ser | Arg | Lys | Gly 75 | Gln | Lys | Lys | Asn | Gln 80 | | |
| Lys | Asn | Lys | Pro | Gly 85 | Pro | Asn | Ile | Glu | Ser 90 | Gly | Asn | Glu | Asp | Asp 95 | Asp | | |
| Ala | Ser | Phe | Lys 100 | Ile | Lys | Thr | Val | Ala 105 | Gln | Lys | Lys | Ala | Glu 110 | Lys | Lys | | |
| Glu | Arg | Glu 115 | Arg | Lys | Lys | Arg | Asp 120 | Glu | Glu | Lys | Ala | Lys 125 | Leu | Arg | Lys | | |
| Leu | Lys 130 | Glu | Lys | Glu | Glu | Leu 135 | Glu | Thr | Gly | Lys | Lys 140 | Asp | Gln | Ser | Lys | | |

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|------------|-----|-----|------------|------------|------------|-----|-----|------------|------------|------------|-----|-----|------------|------------|------------|
| Gln 145 | Lys | Glu | Ser | Gln | Arg 150 | Lys | Phe | Glu | Glu | Glu 155 | Thr | Val | Lys | Ser | Lys 160 |
| Val | Thr | Val | Asp | Thr 165 | Gly | Val | Ile | Pro | Ala 170 | Ser | Glu | Glu | Lys | Ala 175 | Glu |
| Thr | Pro | Thr | Ala 180 | Ala | Glu | Asp | Asp | Asn 185 | Glu | Gly | Asp | Lys | Lys 190 | Asn | Glu |

Arg

<210> 335
 <211> 118
 <212> PRT
 <213> homo sapiens

<400> 335

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| Glu 1 | Thr | Val | Ala | Phe 5 | Ala | Arg | Pro | Phe | Phe 10 | Pro | Ser | Leu | Phe | Ser 15 | Phe |
| Pro | Pro | Leu | Ser 20 | Ser | Phe | Leu | Phe | Leu 25 | Leu | Ile | Phe | Arg | Ser 30 | Phe | Cys |
| Leu | Leu | His 35 | Cys | His | Leu | Leu | Gln 40 | Leu | Trp | Glu | Ser | Leu 45 | Leu | Ser | Leu |
| Gln | Arg 50 | Gln | Glu | Leu | Leu | Gln 55 | Tyr | Gln | Gln | Ser | Leu 60 | Trp | Ile | Leu | Gln |
| Phe 65 | Leu | Leu | Gln | Ile | Ser 70 | Phe | Glu | Ile | Pro | Phe 75 | Val | Tyr | Ser | Asp | Pro 80 |
| Phe | Tyr | Leu | Phe | Leu 85 | Thr | Leu | Leu | Phe | Leu 90 | Ser | Ala | Ser | Ala | Val 95 | Ser |
| Leu | Phe | Leu | His 100 | Leu | Ala | Phe | Phe | Ser 105 | Arg | Ala | Pro | Ser | Phe 110 | Leu | Pro |
| Ser | Phe | Gly 115 | Pro | Leu | Ser | | | | | | | | | | |

<210> 336
 <211> 230
 <212> PRT
 <213> homo sapiens

<400> 336

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| Leu 1 | Gln | Arg | Leu | Leu 5 | Pro | Pro | Gly | Ala | Glu 10 | Arg | Pro | Ala | His | Leu 15 | Cys |
| Thr | Gly | Pro | Gly 20 | Gly | Glu | Asp | Gly | Ala 25 | Gly | Gly | Arg | Val | Pro 30 | Gly | Thr |
| Arg | Pro | Gln 35 | Arg | Pro | Pro | Ala | Leu 40 | Gln | Arg | Ala | Glu | Asp 45 | Gly | Arg | Gln |
| Gly | Gly 50 | Leu | Arg | Val | Ala | Gly 55 | Thr | Ala | Gly | Pro | Pro 60 | Pro | Gly | Val | Pro |
| Leu 65 | Arg | Pro | Gly | Gln | Gly 70 | Gly | Ser | Gly | His | Gln 75 | Glu | Gln | Gly | Ala | Ser 80 |

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|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| His | Pro | Gly | Ser | Leu 85 | Asp | Gln | Gly | Leu | Thr 90 | Gly | Ala | Lys | Arg | Pro 95 | Gln |
| Gly | Cys | Pro | Ala 100 | Cys | Gly | Arg | Arg | Pro 105 | Pro | Cys | Val | Gly | Gly 110 | Val | Pro |
| Gly | Ser | Ala 115 | His | Arg | Pro | Gln | Pro 120 | Glu | Gly | Ala | Ala | Leu 125 | Arg | Arg | Gly |
| Arg | Ser 130 | Arg | Leu | Gln | Gln | Ala 135 | Gly | Pro | Cys | Cys | Cys 140 | Arg | Val | Leu | Trp |
| Leu 145 | Arg | Arg | Cys | His | Pro 150 | Ala | Gly | Leu | Pro | Arg 155 | Arg | Pro | Pro | Ala | Ala 160 |
| Asp | Pro | Gly | Ala | Arg 165 | Ala | Ala | Ala | Gly | Gly 170 | Arg | His | Val | Leu | Cys 175 | Arg |
| Ser | Pro | Leu | His 180 | Pro | Gly | Leu | Arg | Pro 185 | Pro | Leu | Pro | Gln | Trp 190 | Gly | Leu |
| Leu | Arg | Pro 195 | Glu | Gly | Gly | Cys | Leu 200 | Cys | Val | Pro | Val | Ser 205 | Arg | Gly | Ile |
| Leu | Arg 210 | Thr | Ala | Leu | Arg | Glu 215 | Gly | Ala | Gly | Gly | Glu 220 | Val | Ser | Gly | Gly |
| Arg 225 | Gly | Tyr | Leu | Gly | Leu 230 | | | | | | | | | | |

<210> 337

<211> 416

<212> PRT

<213> homo sapiens

<400> 337

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| Gln 1 | Asp | Gly | Ser | Gly 5 | Pro | Phe | Leu | Ala | Asp 10 | Phe | Asn | Gly | Phe | Ser 15 | His |
| Leu | Glu | Leu | Arg 20 | Gly | Leu | His | Thr | Phe 25 | Ala | Arg | Asp | Leu | Gly 30 | Glu | Lys |
| Met | Ala | Leu 35 | Glu | Val | Val | Phe | Leu 40 | Ala | Arg | Gly | Pro | Ser 45 | Gly | Leu | Leu |
| Leu | Tyr 50 | Asn | Gly | Gln | Lys | Thr 55 | Asp | Gly | Lys | Gly | Asp 60 | Phe | Val | Ser | Leu |
| Ala 65 | Leu | Arg | Asp | Arg | Arg 70 | Leu | Glu | Phe | Arg | Tyr 75 | Asp | Leu | Gly | Lys | Gly 80 |
| Ala | Ala | Val | Ile | Arg 85 | Ser | Arg | Glu | Pro | Val 90 | Thr | Leu | Gly | Ala | Trp 95 | Thr |
| Arg | Val | Ser | Leu 100 | Glu | Arg | Asn | Gly | Arg 105 | Lys | Gly | Ala | Leu | Arg 110 | Val | Gly |
| Asp | Gly | Pro 115 | Arg | Val | Leu | Gly | Glu 120 | Ser | Pro | Val | Pro | His 125 | Thr | Val | Leu |
| Asn | Leu | Lys | Glu | Pro | Leu | Tyr | Val | Gly | Gly | Ala | Pro | Asp | Phe | Ser | Lys |

| 130 | | | | | 135 | | | | | 140 | | | | | |
|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Leu 145 | Ala | Arg | Ala | Ala | Ala 150 | Val | Ser | Ser | Gly | Phe 155 | Asp | Gly | Ala | Ile | Gln 160 |
| Leu | Val | Ser | Leu | Gly 165 | Gly | Arg | Gln | Leu | Leu 170 | Thr | Pro | Glu | His | Val 175 | Leu |
| Arg | Gln | Val | Asp 180 | Val | Thr | Ser | Phe | Ala 185 | Gly | His | Pro | Cys | Thr 190 | Arg | Ala |
| Ser | Gly | His 195 | Pro | Cys | Leu | Asn | Gly 200 | Ala | Ser | Cys | Val | Pro 205 | Arg | Glu | Ala |
| Ala | Tyr 210 | Val | Cys | Leu | Cys | Pro 215 | Gly | Gly | Phe | Ser | Gly 220 | Pro | His | Cys | Glu |
| Lys 225 | Gly | Leu | Val | Glu | Lys 230 | Ser | Ala | Gly | Asp | Val 235 | Asp | Thr | Leu | Ala | Phe 240 |
| Asp | Gly | Arg | Thr | Phe 245 | Val | Glu | Tyr | Leu | Asn 250 | Ala | Val | Thr | Glu | Ser 255 | Glu |
| Lys | Ala | Leu | Gln 260 | Ser | Asn | His | Phe | Glu 265 | Leu | Ser | Leu | Arg | Thr 270 | Glu | Ala |
| Thr | Gln | Gly 275 | Leu | Val | Leu | Trp | Ser 280 | Gly | Lys | Ala | Thr | Glu 285 | Arg | Ala | Asp |
| Tyr | Val 290 | Ala | Leu | Ala | Ile | Val 295 | Asp | Gly | His | Leu | Gln 300 | Leu | Ser | Tyr | Asn |
| Leu 305 | Gly | Ser | Gln | Pro | Val 310 | Val | Leu | Arg | Ser | Thr 315 | Val | Pro | Val | Asn | Thr 320 |
| Asn | Arg | Trp | Leu | Arg 325 | Val | Val | Ala | His | Arg 330 | Glu | Gln | Arg | Glu | Gly 335 | Ser |
| Leu | Gln | Val | Gly 340 | Asn | Glu | Ala | Pro | Val 345 | Thr | Gly | Ser | Ser | Pro 350 | Leu | Gly |
| Ala | Thr | Gln 355 | Leu | Asp | Thr | Asp | Gly 360 | Ala | Leu | Trp | Leu | Gly 365 | Gly | Leu | Pro |
| Glu | Leu 370 | Pro | Val | Gly | Pro | Ala 375 | Leu | Pro | Lys | Ala | Tyr 380 | Gly | Thr | Gly | Phe |
| Val 385 | Gly | Cys | Leu | Arg | Asp 390 | Val | Val | Val | Gly | Arg 395 | His | Pro | Leu | His | Leu 400 |
| Leu | Glu | Asp | Ala | Val 405 | Thr | Lys | Pro | Glu | Leu 410 | Arg | Pro | Cys | Pro | Thr 415 | Pro |

<210> 338

<211> 241

<212> PRT

<213> homo sapiens

<400> 338

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|----------|-----|-----|-----|----------|-----|-----|-----|-----|-----------|-----|-----|-----|-----|-----------|-----|
| Asn 1 | Gln | His | Met | Lys 5 | Asn | Thr | Ala | Met | Ala 10 | Arg | Pro | Arg | Tyr | Pro 15 | Gly |
|----------|-----|-----|-----|----------|-----|-----|-----|-----|-----------|-----|-----|-----|-----|-----------|-----|

| | | | | | | | | | | | | | | | |
|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Arg | Arg | Gln | Arg 20 | Ser | Thr | Pro | Ser | His 25 | Ser | Glu | Leu | Leu | Ser 30 | Ile | Ala |
| Pro | Arg | Arg 35 | Ala | Trp | Gly | Val | Ala 40 | Glu | Gly | Tyr | Gly | His 45 | Val | Gln | Gly |
| Gly | Trp 50 | Ala | Gly | Pro | Ala | Glu 55 | Gly | Gln | Asp | Thr | Gln 60 | Ile | Gly | Pro | Gly |
| Leu 65 | Ala | Ser | Ala | Pro | Gln 70 | Gln | Pro | Gly | Leu | Ala 75 | Gln | Ala | Ala | Arg | Glu 80 |
| Gln | Arg | Arg | Ala | Val 85 | Pro | Ser | Ser | Asn | Ile 90 | Val | Trp | Lys | Ser | Gln 95 | Tyr |
| Trp | Arg | Arg | Arg 100 | Pro | Arg | Gln | Gly | Pro 105 | Glu | His | Thr | Gln | Glu 110 | Gly | Ala |
| Ala | Gln | Ile 115 | Gly | Ala | Trp | Lys | Gly 120 | Pro | Val | Gly | Ser | Pro 125 | Gly | Gly | Arg |
| Ala | Pro 130 | Ser | Asp | Leu | Ser | Ser 135 | Pro | Phe | Leu | Ser | Gly 140 | Thr | Arg | Val | Pro |
| Pro 145 | Asp | Gly | Ala | Arg | Val 150 | Ile | Gln | Glu | Pro | Gly 155 | Leu | Leu | Pro | Gly | Gly 160 |
| Asp | Thr | Val | Gly | Gln 165 | Ala | Gln | Cys | Lys | Ala 170 | Gly | Ala | Gln | His | Leu 175 | Glu |
| Ala | Gly | Val | Cys 180 | Val | Leu | Arg | Leu | Pro 185 | Ser | Thr | Pro | Ser | Pro 190 | Pro | Arg |
| Cys | His | Leu 195 | Ala | Cys | Pro | Ser | Leu 200 | Ser | Thr | Arg | Ser | Val 205 | Cys | Ser | Thr |
| Ala | Ala 210 | Trp | Thr | Glu | Gly | Arg 215 | Pro | Gly | Gln | Gln | Ser 220 | Leu | Arg | Pro | Thr |
| Leu 225 | Arg | Gln | Glu | Asn | His 230 | Ile | Lys | Lys | Arg | Gln 235 | Val | Tyr | Lys | Asn | Arg 240 |

Lys

<210> 339

<211> 79

<212> PRT

<213> homo sapiens

<400> 339

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|----------|-----------|-----------|-----------|----------|-----|-----------|-----------|-----------|-----------|-----|-----------|-----------|-----------|-----------|-----|
| Leu 1 | Leu | Gln | Pro | Gln 5 | Gly | Glu | Met | Pro | Pro 10 | Gly | Asn | Pro | Pro | Met 15 | Ser |
| Thr | Arg | Gly | Gln 20 | Glu | Ala | Thr | Val | Leu 25 | Arg | Thr | Pro | Glu | Asn 30 | Leu | Ala |
| Gly | Glu | Leu 35 | Phe | Leu | Val | His | Pro 40 | Ser | Leu | Gln | Leu | Tyr 45 | Leu | Cys | Pro |
| Ala | Asp 50 | Asn | Val | Lys | Asp | Trp 55 | Ser | Lys | Val | Val | Leu 60 | Ala | Tyr | Glu | Pro |

| | | | | | | | | | | | | | | |
|-----------|-----|-----|-----|-----|-----------|-----|-----|-----|-----|-----------|-----|-----|-----|-----|
| Val 65 | Trp | Ala | Ile | Gly | Thr 70 | Gly | Lys | Thr | Ala | Thr 75 | Pro | Gln | Gln | Gly |
|-----------|-----|-----|-----|-----|-----------|-----|-----|-----|-----|-----------|-----|-----|-----|-----|

<210> 340
 <211> 62
 <212> PRT
 <213> homo sapiens

<400> 340

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|----------|-----------|-----------|-----------|----------|-----|-----------|-----------|-----------|-----------|-----|-----------|-----------|-----------|-----------|-----|
| Phe 1 | Pro | Val | Gly | Val 5 | Leu | Gln | Ser | Cys | Gln 10 | Tyr | Gln | Trp | Pro | Thr 15 | Gln |
| Ala | His | Arg | Pro 20 | Gly | Arg | Pro | Cys | Ser 25 | Ser | Pro | Ser | Arg | Tyr 30 | Leu | Gln |
| Gly | Arg | Asp 35 | Thr | Ala | Gly | Gly | Lys 40 | Gly | Glu | Gln | Glu | Arg 45 | Ala | Leu | Gln |
| Pro | Gly 50 | Ser | Pro | Glu | Tyr | Glu 55 | Glu | Arg | Trp | Pro | Pro 60 | Ala | Pro | | |

<210> 341
 <211> 80
 <212> PRT
 <213> homo sapiens

<400> 341

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|-----------|-----------|-----------|-----------|----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Ser 1 | Leu | Leu | Gly | Cys 5 | Cys | Ser | Leu | Ala | Ser 10 | Thr | Asn | Gly | Pro | His 15 | Arg |
| Leu | Ile | Gly | Gln 20 | Asp | Asp | Leu | Ala | Pro 25 | Val | Leu | His | Val | Ile 30 | Cys | Arg |
| Ala | Glu | Ile 35 | Gln | Leu | Glu | Gly | Arg 40 | Val | Asn | Lys | Lys | Glu 45 | Leu | Ser | Ser |
| Gln | Val 50 | Leu | Arg | Ser | Thr | Lys 55 | Asn | Gly | Gly | Leu | Leu 60 | Pro | Pro | Ser | Gly |
| His 65 | Trp | Gly | Ile | Ser | Arg 70 | Trp | His | Leu | Pro | Leu 75 | Gly | Leu | Glu | Lys | Ser 80 |

<210> 342
 <400> 342
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<210> 343
 <400> 343
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<210> 344
 <400> 344
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<210> 345
 <211> 257
 <212> PRT
 <213> homo sapiens

<400> 345

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|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Lys 1 | Asn | Leu | Ser | Gln 5 | Leu | Glu | Pro | Arg | Glu 10 | Asn | Ala | Lys | Glu | Glu 15 | Val |
| Arg | Lys | Glu | Arg 20 | Gly | Met | Gly | Trp | Val 25 | Ala | Ala | Gly | Ala | Ala 30 | Gln | Leu |
| Leu | Ser | Leu 35 | Leu | Ser | Thr | Ser | Thr 40 | Ala | Ser | Asp | Ser | Ser 45 | Val | Ile | Ser |
| Ser | Ser 50 | Ala | Cys | Thr | Ser | Gly 55 | Leu | Leu | Pro | Arg | Arg 60 | Arg | Ser | Pro | Ala |
| Ser 65 | Pro | Arg | Ser | Ala | His 70 | Leu | His | His | Leu | Gly 75 | Gly | Leu | Glu | His | Phe 80 |
| His | Leu | Ala | Leu | Ala 85 | Asp | Leu | Leu | Asp | Val 90 | Glu | Gly | Glu | Gly | Trp 95 | His |
| Leu | Val | Asp | Arg 100 | Gly | Leu | Gly | Ala | Arg 105 | Val | His | His | Val | Val 110 | Gly | Arg |
| Glu | Gly | Phe 115 | Ala | Gln | Leu | Val | Pro 120 | Arg | Arg | Leu | Gln | Phe 125 | Leu | Ala | Pro |
| Leu | Gly 130 | Gly | His | Gln | Ala | Arg 135 | Ala | Gln | Leu | Val | His 140 | Ala | Leu | Leu | Gln |
| Gly 145 | Val | Pro | Arg | Leu | Leu 150 | Gln | Val | Phe | Leu | Gly 155 | Leu | Glu | Ala | Arg | Leu 160 |
| Leu | Gln | Val | Leu | Ala 165 | Gly | Thr | His | Leu | Gly 170 | Leu | Leu | His | Leu | Leu 175 | Leu |
| Gly | Glu | Gly | Leu 180 | Leu | Glu | Val | Val | His 185 | Ala | Pro | Gln | Ala | Leu 190 | Arg | Leu |
| Ile | Arg | Ser 195 | Ala | Arg | Asp | Ser | Ser 200 | Ile | Thr | Ser | Ser | Thr 205 | Ser | Thr | Ala |
| Ser | Ser 210 | Asp | Glu | Ser | Ser | Ser 215 | Ala | Ala | Ala | Ser | Ser 220 | Ser | Gly | Arg | Ser |
| Pro 225 | Ser | Pro | Ser | Ser | Ser 230 | Pro | Ser | Phe | Ser | Gly 235 | Ser | Ala | Ser | Asp | Ser 240 |
| Phe | Ser | Asp | Leu | Leu 245 | Met | Leu | Ser | Leu | Ala 250 | Gly | Ser | Phe | Thr | Ser 255 | Ser |

Trp

<210> 346

<211> 237

<212> PRT

<213> homo sapiens

<400> 346

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|----------|-----|-----|-----------|----------|-----|-----|-----|-----------|-----------|-----|-----|-----|-----------|-----------|-----|
| Lys 1 | Ser | Arg | Arg | Arg 5 | Cys | Gln | Arg | Arg | Arg 10 | Ala | Arg | Ser | Trp | Ala 15 | Arg |
| Ala | Ser | Gly | Pro 20 | Arg | Arg | Thr | Gln | Arg 25 | Arg | Trp | Ser | Phe | Arg 30 | Arg | Thr |

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|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Arg | Arg | Trp 35 | Arg | Leu | Arg | Arg | Leu 40 | Leu | Arg | Ser | Pro | Ala 45 | Gln | Ser | Val |
| Ser | Ser 50 | Ala | Gly | Pro | Ala | Ala 55 | Arg | Gly | Arg | Leu | Gln 60 | Glu | Gly | Leu | Leu |
| Gln 65 | Gly | Glu | Asp | Gly | Glu 70 | Asp | Gln | Gly | Ala | Tyr 75 | Pro | Arg | Glu | Pro | Gly 80 |
| Glu | Asp | Ala | Pro | Gln 85 | Asp | Gln | Gly | Lys | Pro 90 | Gly | Glu | Asp | Ala | Ala 95 | His |
| Pro | Gly | Glu | Ala 100 | His | Glu | Gln | Ala | Gly 105 | His | Ala | Pro | Gly | Ala 110 | Arg | Arg |
| Ala | Ala | Arg 115 | Glu | Thr | Glu | Asp | Val 120 | Ala | Gly | Gln | Val | Ala 125 | Gln | Ile | Leu |
| His | Ala 130 | Arg | Pro | Arg | Gly | Val 135 | Arg | Ala | Leu | Gln | Asp 140 | Arg | Gly | Leu | Gln |
| Gly 145 | Ala | Thr | Leu | His | Leu 150 | Pro | Arg | Gln | Glu | Asp 155 | Pro | Arg | Gly | Pro | Gly 160 |
| Gly | Ser | Ala | Gln | Gly 165 | His | Arg | Asp | Gly | Gly 170 | Gly | Gly | Arg | Ser | Gly 175 | Gly |
| Arg | Pro | Ala | Thr 180 | Cys | Gly | Ala | Gly | Ala 185 | Ala | Pro | Thr | Cys | Thr 190 | Arg | Cys |
| Trp | Arg | Ser 195 | Pro | Arg | Ser | Arg | Thr 200 | Pro | Cys | Trp | Trp | Thr 205 | Arg | Ala | Thr |
| Ala | Thr 210 | Glu | Arg | Pro | Pro | Leu 215 | Pro | Pro | Thr | Pro | Phe 220 | Leu | Ala | Pro | Ser |
| Glu 225 | Leu | Pro | Leu | Ser | His 230 | Ser | Leu | Ser | Ala | Arg 235 | Ala | Gly | | | |

<210> 347

<211> 263

<212> PRT

<213> homo sapiens

<400> 347

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|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Gly 1 | Arg | Leu | Pro | Gly 5 | Tyr | Pro | Asp | Arg | Arg 10 | Gly | Pro | Gly | Ala | Ser 15 | Ser |
| Ala | Gly | Ala | Gln 20 | Ala | Ala | Glu | Glu | Pro 25 | Ser | Gly | Ala | Gly | Ser 30 | Glu | Glu |
| Leu | Ile | Lys 35 | Ser | Asp | Gln | Val | Asn 40 | Gly | Val | Leu | Val | Leu 45 | Ser | Leu | Leu |
| Asp | Lys 50 | Ile | Ile | Gly | Ala | Val 55 | Asp | Gln | Ile | Gln | Leu 60 | Thr | Gln | Ala | Gln |
| Leu 65 | Glu | Glu | Arg | Gln | Ala 70 | Glu | Met | Glu | Gly | Ala 75 | Val | Gln | Ser | Ile | Gln 80 |
| Gly | Glu | Leu | Ser | Lys 85 | Leu | Gly | Lys | Ala | His 90 | Ala | Thr | Thr | Ser | Asn 95 | Thr |

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|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|--|
| Val | Ser | Lys | Leu 100 | Leu | Glu | Lys | Val | Arg 105 | Lys | Val | Ser | Val | Asn 110 | Val | Lys | |
| Thr | Val | Arg 115 | Gly | Ser | Leu | Glu | Arg 120 | Gln | Ala | Gly | Gln | Ile 125 | Lys | Lys | Leu | |
| Glu | Val 130 | Asn | Glu | Ala | Glu | Leu 135 | Leu | Arg | Arg | Arg | Asn 140 | Phe | Lys | Val | Met | |
| Ile 145 | Tyr | Gln | Asp | Glu | Val 150 | Lys | Leu | Pro | Ala | Lys 155 | Leu | Ser | Ile | Ser | Lys 160 | |
| Ser | Leu | Lys | Glu | Ser 165 | Glu | Ala | Leu | Pro | Glu 170 | Lys | Glu | Gly | Glu | Glu 175 | Leu | |
| Gly | Glu | Gly | Glu 180 | Arg | Pro | Glu | Glu | Asp 185 | Ala | Ala | Ala | Leu | Glu 190 | Leu | Ser | |
| Ser | Asp | Glu 195 | Ala | Val | Glu | Val | Glu 200 | Glu | Val | Ile | Glu 205 | Glu | Ser | Arg | Ala | |
| Glu | Arg 210 | Ile | Lys | Arg | Arg | Ala 215 | Cys | Gly | Ala | Trp | Thr 220 | Thr | Ser | Arg | Arg | |
| Pro 225 | Ser | Pro | Arg | Arg | Arg 230 | Trp | Arg | Arg | Pro | Arg 235 | Cys | Val | Pro | Ala | Arg 240 | |
| Thr | Trp | Arg | Arg | Arg 245 | Ala | Ser | Arg | Pro | Arg 250 | Lys | Thr | Trp | Arg | Arg 255 | Arg | |
| Gly | Thr | Pro | Trp 260 | Arg | Ser | Ala | | | | | | | | | | |

<210> 348
 <211> 106
 <212> PRT
 <213> homo sapiens

<400> 348

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|-----------|-----------|-----------|------------|-----------|-----------|-----------|-----------|------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|--|
| Ser 1 | Ser | Gly | Ser | Ser 5 | Arg | Phe | Gly | Ser | Ser 10 | Gly | Ser | Arg | Arg | Arg 15 | Tyr | |
| Ala | Ser | Leu | Tyr 20 | Phe | Cys | Cys | Ala | Ile 25 | Glu | Asp | Gln | Asp | Asn 30 | Glu | Leu | |
| Ile | Thr | Leu 35 | Glu | Ile | Ile | His | Arg 40 | Tyr | Val | Glu | Leu | Leu 45 | Asp | Lys | Tyr | |
| Phe | Gly 50 | Ser | Val | Cys | Glu | Leu 55 | Asp | Ile | Ile | Phe | Asn 60 | Phe | Glu | Lys | Ala | |
| Tyr 65 | Phe | Ile | Leu | Asp | Glu 70 | Phe | Leu | Leu | Gly | Gly 75 | Glu | Val | Gln | Glu | Thr 80 | |
| Ser | Lys | Lys | Asn | Val 85 | Leu | Lys | Ala | Ile | Glu 90 | Gln | Ala | Asp | Leu | Leu 95 | Gln | |
| Glu | Glu | Ala | Glu 100 | Thr | Pro | Arg | Ser | Gly 105 | Ser | | | | | | | |

<210> 349

<211> 78
 <212> PRT
 <213> homo sapiens

<400> 349

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|-----------|-----|-----------|-----------|----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----|
| Leu 1 | Phe | Leu | Met | Pro 5 | Gln | Asn | Lys | Val | Arg 10 | Met | Val | Ile | Cys | Gln 15 | Glu |
| Phe | Phe | Ile | Thr 20 | Val | Ser | Tyr | Lys | Lys 25 | Arg | Val | Ala | Leu | Phe 30 | Thr | Val |
| Leu | Cys | Val 35 | Lys | Ser | Leu | Phe | Lys 40 | Ala | Arg | Met | Phe | Pro 45 | Leu | Gly | Tyr |
| Leu 50 | Leu | Lys | Leu | Asn | Leu | Phe 55 | Cys | Phe | Pro | Pro | Leu 60 | Arg | Ser | Ala | Ala |
| His 65 | Phe | Thr | Ala | Ala | Ser 70 | Phe | Leu | Ser | Met | Ala 75 | Leu | Pro | Ser | | |

<210> 350
 <211> 65
 <212> PRT
 <213> homo sapiens

<400> 350

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|-----------|-----|-----------|-----------|----------|-----|-----------|-----------|-----------|-----------|-----|-----------|-----------|-----------|-----------|-----|
| Thr 1 | Cys | Leu | His | Gly 5 | Leu | Tyr | Phe | His | Leu 10 | Tyr | Met | Leu | Gly | Trp 15 | Ile |
| Lys | Leu | Cys | Cys 20 | Asp | Cys | Asp | Gln | His 25 | Ser | Gly | His | Val | Ser 30 | Thr | Val |
| Leu | Ser | His 35 | Arg | Gln | Leu | Val | Val 40 | Ile | Asn | Val | Gln | Arg 45 | Thr | Lys | Lys |
| Lys 50 | Lys | Gly | Ala | Ala | Ser | Leu 55 | Gly | Gly | Ile | Thr | Gly 60 | Ser | Gly | Val | Lys |
| Arg 65 | | | | | | | | | | | | | | | |

<210> 351
 <211> 196
 <212> PRT
 <213> homo sapiens

<400> 351

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|-----------|-----|-----------|-----------|----------|-----|-----------|-----------|-----------|-----------|-----|-----------|-----------|-----------|-----------|-----|
| Leu 1 | Pro | Gly | Leu | Pro 5 | Leu | Arg | Gln | Leu | Gly 10 | Gly | Val | Cys | His | Gly 15 | His |
| Arg | Pro | Gly | Leu 20 | Leu | Leu | His | Gln | Gln 25 | His | Gly | Gly | Gly | Ala 30 | Gly | Ala |
| Val | Gln | Gln 35 | Pro | Gln | Arg | Glu | Glu 40 | Glu | Ala | Leu | His | Asp 45 | Pro | Gly | Gln |
| Gly 50 | Ser | Ala | Pro | Ala | Glu | Leu 55 | Cys | Gln | Phe | Gln | Gln 60 | His | Val | Pro | Arg |
| Phe | Pro | Leu | Gln | Gln | Pro | Gln | Ala | Val | Gln | Glu | Gly | Gly | Gly | Ala | Gly |

| 65 | | | | 70 | | | | 75 | | | | 80 | | | |
|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Ala | Gly | Gln | Gly | Leu 85 | Val | Leu | Trp | Gln | Pro 90 | Gly | Ala | Gly | Leu | Gln 95 | Gly |
| Val | Gln | Pro | Gly 100 | Asp | Asp | Gly | Ala | Pro 105 | Asp | Leu | Gln | His | Gly 110 | Asp | Ala |
| Ala | Gly | Asp 115 | Ser | His | His | Asp | Asp 120 | Pro | Ala | Gln | Glu | Leu 125 | Pro | Ala | Ala |
| Glu | His 130 | Arg | Ala | Gln | Gly | Pro 135 | Gly | Gly | Pro | Arg | Pro 140 | Ala | Leu | Arg | Gly |
| Gly 145 | Ala | Arg | Ser | Asn | Cys 150 | Arg | Val | Cys | Leu | Val 155 | Gln | Met | Cys | Pro | Glu 160 |
| Ala | Pro | Glu | Gly | Ser 165 | His | Gln | Leu | Met | Pro 170 | Ala | Ser | Asp | Pro | Gln 175 | Gln |
| Gly | Trp | Phe | Ala 180 | Ala | Ala | Ala | Gln | Gly 185 | Glu | Pro | Val | Ser | Asp 190 | Pro | Gly |
| His | His | His 195 | His | | | | | | | | | | | | |

<210> 352
 <211> 361
 <212> PRT
 <213> homo sapiens
 <400> 352

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|------------|------------|------------|------------|-----------|------------|------------|------------|------------|-----------|------------|------------|------------|------------|-----------|------------|
| Ser 1 | Leu | Ala | Ser | Leu 5 | Ser | Asp | Ser | Leu | Gly 10 | Val | Ser | Val | Met | Ala 15 | Thr |
| Asp | Gln | Asp | Ser 20 | Tyr | Ser | Thr | Ser | Ser 25 | Thr | Glu | Glu | Glu | Leu 30 | Glu | Gln |
| Phe | Ser | Ser 35 | Pro | Ser | Val | Lys | Lys 40 | Lys | Pro | Ser | Met | Ile 45 | Leu | Gly | Lys |
| Ala | Arg 50 | His | Arg | Leu | Ser | Phe 55 | Ala | Ser | Phe | Ser | Ser 60 | Met | Phe | His | Ala |
| Phe 65 | Leu | Ser | Asn | Asn | Arg 70 | Lys | Leu | Tyr | Lys | Lys 75 | Val | Val | Glu | Leu | Ala 80 |
| Gln | Asp | Lys | Gly | Ser 85 | Tyr | Phe | Gly | Ser | Leu 90 | Val | Gln | Asp | Tyr | Lys 95 | Val |
| Tyr | Ser | Leu | Glu 100 | Met | Met | Ala | Arg | Gln 105 | Thr | Ser | Ser | Thr | Glu 110 | Met | Leu |
| Gln | Glu | Ile 115 | Arg | Thr | Met | Met | Thr 120 | Gln | Leu | Lys | Ser | Tyr 125 | Leu | Leu | Gln |
| Ser | Thr 130 | Glu | Leu | Lys | Ala | Leu 135 | Val | Asp | Pro | Ala | Leu 140 | His | Ser | Glu | Glu |
| Glu 145 | Leu | Glu | Ala | Ile | Val 150 | Glu | Ser | Ala | Leu | Tyr 155 | Lys | Cys | Val | Leu | Lys 160 |

| | | | | | | | | | | | | | | | |
|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Pro | Leu | Lys | Glu | Ala 165 | Ile | Asn | Ser | Cys | Leu 170 | His | Gln | Ile | His | Ser 175 | Lys |
| Asp | Gly | Ser | Leu 180 | Gln | Gln | Leu | Lys | Glu 185 | Asn | Gln | Leu | Val | Ile 190 | Leu | Ala |
| Thr | Thr | Thr 195 | Thr | Asp | Leu | Gly | Val 200 | Thr | Thr | Ser | Val | Pro 205 | Glu | Val | Pro |
| Met | Met 210 | Glu | Lys | Ile | Leu | Gln 215 | Lys | Phe | Thr | Ser | Met 220 | His | Lys | Ala | Tyr |
| Ser 225 | Pro | Glu | Lys | Lys | Ile 230 | Ser | Ile | Leu | Leu | Lys 235 | Thr | Cys | Lys | Leu | Ile 240 |
| Tyr | Asp | Ser | Met | Ala 245 | Leu | Gly | Asn | Pro | Gly 250 | Lys | Pro | Tyr | Gly | Ala 255 | Asp |
| Asp | Phe | Leu | Pro 260 | Val | Leu | Met | Tyr | Val 265 | Leu | Ala | Arg | Ser | Asn 270 | Leu | Thr |
| Glu | Met | Leu 275 | Leu | Asn | Val | Glu | Tyr 280 | Met | Met | Glu | Leu | Met 285 | Asp | Pro | Ala |
| Leu | Gln 290 | Leu | Gly | Glu | Gly | Ser 295 | Tyr | Tyr | Leu | Thr | Thr 300 | Thr | Tyr | Gly | Ala |
| Leu 305 | Glu | His | Ile | Lys | Ser 310 | Tyr | Asp | Lys | Ile | Thr 315 | Val | Thr | Arg | Gln | Leu 320 |
| Ser | Val | Glu | Val | Gln 325 | Asp | Ser | Ile | His | Arg 330 | Trp | Glu | Arg | Arg | Arg 335 | Thr |
| Leu | Asn | Lys | Ala 340 | Arg | Ala | Ser | Arg | Ser 345 | Ser | Val | Gln | Pro | Leu 350 | His | Leu |
| Arg | Val | Val 355 | Pro | Gly | Ala | Arg | Ala 360 | Ala | | | | | | | |

<210> 353

<211> 161

<212> PRT

<213> homo sapiens

<400> 353

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|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Val 1 | Asp | Gly | Phe | Leu 5 | Gln | Gly | Leu | Gln | Asp 10 | Thr | Phe | Val | Gln | Gly 15 | Arg |
| Leu | Tyr | Asn | Cys 20 | Phe | Glu | Leu | Leu | Leu 25 | Gly | Val | Gln | Gly | Gly 30 | Val | His |
| Gln | Gly | Leu 35 | Glu | Leu | Gly | Ala | Leu 40 | Gln | Gln | Val | Ala | Leu 45 | Glu | Leu | Gly |
| His | His 50 | Gly | Ala | Asn | Leu | Leu 55 | Gln | His | Leu | Arg | Ala 60 | Gly | Gly | Leu | Ala |
| Arg 65 | His | His | Leu | Gln | Ala 70 | Val | His | Leu | Val | Val 75 | Leu | His | Gln | Ala | Ala 80 |
| Lys | Val | Arg | Ala | Leu 85 | Val | Leu | Arg | Gln | Leu 90 | His | His | Leu | Leu | Val 95 | Gln |

1870 1871 1872 1873 1874 1875 1876 1877 1878 1879 1880 1881 1882 1883 1884 1885 1886 1887 1888 1889 1890 1891 1892 1893 1894 1895 1896 1897 1898 1899 1900 1901 1902 1903 1904 1905 1906 1907 1908 1909 1910 1911 1912 1913 1914 1915 1916 1917 1918 1919 1920 1921 1922 1923 1924 1925 1926 1927 1928 1929 1930 1931 1932 1933 1934 1935 1936 1937 1938 1939 1940 1941 1942 1943 1944 1945 1946 1947 1948 1949 1950 1951 1952 1953 1954 1955 1956 1957 1958 1959 1960 1961 1962 1963 1964 1965 1966 1967 1968 1969 1970 1971 1972 1973 1974 1975 1976 1977 1978 1979 1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 1990 1991 1992 1993 1994 1995 1996 1997 1998 1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021 2022 2023 2024 2025 2026 2027 2028 2029 2030 2031 2032 2033 2034 2035 2036 2037 2038 2039 2040 2041 2042 2043 2044 2045 2046 2047 2048 2049 2050 2051 2052 2053 2054 2055 2056 2057 2058 2059 2060 2061 2062 2063 2064 2065 2066 2067 2068 2069 2070 2071 2072 2073 2074 2075 2076 2077 2078 2079 2080 2081 2082 2083 2084 2085 2086 2087 2088 2089 2090 2091 2092 2093 2094 2095 2096 2097 2098 2099 2100 2101 2102 2103 2104 2105 2106 2107 2108 2109 2110 2111 2112 2113 2114 2115 2116 2117 2118 2119 2120 2121 2122 2123 2124 2125 2126 2127 2128 2129 2130 2131 2132 2133 2134 2135 2136 2137 2138 2139 2140 2141 2142 2143 2144 2145 2146 2147 2148 2149 2150 2151 2152 2153 2154 2155 2156 2157 2158 2159 2160 2161 2162 2163 2164 2165 2166 2167 2168 2169 2170 2171 2172 2173 2174 2175 2176 2177 2178 2179 2180 2181 2182 2183 2184 2185 2186 2187 2188 2189 2190 2191 2192 2193 2194 2195 2196 2197 2198 2199 2200 2201 2202 2203 2204 2205 2206 2207 2208 2209 2210 2211 2212 2213 2214 2215 2216 2217 2218 2219 2220 2221 2222 2223 2224 2225 2226 2227 2228 2229 2230 2231 2232 2233 2234 2235 2236 2237 2238 2239 2240 2241 2242 2243 2244 2245 2246 2247 2248 2249 2250 2251 2252 2253 2254 2255 2256 2257 2258 2259 2260 2261 2262 2263 2264 2265 2266 2267 2268 2269 2270 2271 2272 2273 2274 2275 2276 2277 2278 2279 2280 2281 2282 2283 2284 2285 2286 2287 2288 2289 2290 2291 2292 2293 2294 2295 2296 2297 2298 2299 2300 2301 2302 2303 2304 2305 2306 2307 2308 2309 2310 2311 2312 2313 2314 2315 2316 2317 2318 2319 2320 2321 2322 2323 2324 2325 2326 2327 2328 2329 2330 2331 2332 2333 2334 2335 2336 2337 2338 2339 2340 2341 2342 2343 2344 2345 2346 2347 2348 2349 2350 2351 2352 2353 2354 2355 2356 2357 2358 2359 2360 2361 2362 2363 2364 2365 2366 2367 2368 2369 2370 2371 2372 2373 2374 2375 2376 2377 2378 2379 2380 2381 2382 2383 2384 2385 2386 2387 2388 2389 2390 2391 2392 2393 2394 2395 2396 2397 2398 2399 2400 2401 2402 2403 2404 2405 2406 2407 2408 2409 2410 2411 2412 2413 2414 2415 2416 2417 2418 2419 2420 2421 2422 2423 2424 2425 2426 2427 2428 2429 2430 2431 2432 2433 2434 2435 2436 2437 2438 2439 2440 2441 2442 2443 2444 2445 2446 2447 2448 2449 2450 2451 2452 2453 2454 2455 2456 2457 2458 2459 2460 2461 2462 2463 2464 2465 2466 2467 2468 2469 2470 2471 2472 2473 2474 2475 2476 2477 2478 2479 2480 2481 2482 2483 2484 2485 2486 2487 2488 2489 2490 2491 2492 2493 2494 2495 2496 2497 2498 2499 2500 2501 2502 2503 2504 2505 2506 2507 2508 2509 2510 2511 2512 2513 2514 2515 2516 2517 2518 2519 2520 2521 2522 2523 2524 2525 2526 2527 2528 2529 2530 2531 2532 2533 2534 2535 2536 2537 2538 2539 2540 2541 2542 2543 2544 2545 2546 2547 2548 2549 2550 2551 2552 2553 2554 2555 2556 2557 2558 2559 2560 2561 2562 2563 2564 2565 2566 2567 2568 2569 2570 2571 2572 2573 2574 2575 2576 2577 2578 2579 2580 2581 2582 2583 2584 2585 2586 2587 2588 2589 2590 2591 2592 2593 2594 2595 2596 2597 2598 2599 2600 2601 2602 2603 2604 2605 2606 2607 2608 2609 2610 2611 2612 2613 2614 2615 2616 2617 2618 2619 2620 2621 2622 2623 2624 2625 2626 2627 2628 2629 2630 2631 2632 2633 2634 2635 2636 2637 2638 2639 2640 2641 2642 2643 2644 2645 2646 2647 2648 2649 2650 2651 2652 2653 2654 2655 2656 2657 2658 2659 2660 2661 2662 2663 2664 2665 2666 2667 2668 2669 2670 2671 2672 2673 2674 2675 2676 2677 2678 2679 2680 2681 2682 2683 2684 2685 2686 2687 2

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| Ser 1 | Gly | Arg | Gly | Pro 5 | Lys | Tyr | Val | Ile | Asp 10 | Val | Glu | Gln | Pro | Phe 15 | Ser |
| Cys | Thr | Ser | Leu 20 | Asp | Ala | Val | Val | Asn 25 | Tyr | Phe | Val | Ser | His 30 | Thr | Lys |
| Lys | Ala | Leu 35 | Val | Pro | Phe | Leu | Leu 40 | Asp | Glu | Asp | Tyr | Glu 45 | Lys | Val | Leu |
| Gly | Tyr 50 | Val | Glu | Ala | Asp | Lys 55 | Glu | Asn | Gly | Glu | Asn 60 | Val | Trp | Val | Ala |
| Pro 65 | Ser | Ala | Pro | Gly | Pro 70 | Gly | Pro | Ala | Pro | Cys 75 | Thr | Gly | Gly | Pro | Lys 80 |
| Pro | Leu | Ser | Pro | Ala 85 | Ser | Ser | Gln | Asp | Lys 90 | Leu | Pro | Pro | Leu | Pro 95 | Pro |
| Leu | Pro | Asn | Gln 100 | Glu | Glu | Asn | Tyr | Val 105 | Thr | Pro | Ile | Gly | Asp 110 | Gly | Pro |
| Ala | Val | Asp 115 | Tyr | Glu | Asn | Gln | Asp 120 | Val | Ala | Ser | Ser | Ser 125 | Trp | Pro | Val |
| Ile | Leu 130 | Lys | Pro | Lys | Lys | Leu 135 | Pro | Lys | Pro | Pro | Ala 140 | Lys | Leu | Pro | Lys |
| Pro 145 | Pro | Val | Gly | Pro | Lys 150 | Pro | Glu | Pro | Lys | Val 155 | Phe | Asn | Gly | Gly | Leu 160 |
| Gly | Arg | Glu | Ala 165 | Ala | Ser | Ser | Val | Ser | Ala 170 | Gln | Pro | Leu | Leu | Ser 175 | Pro |
| Gln | Ala | Gly | Leu 180 | Gly | Arg | His | Gly | Arg 185 | Gln | Ser | Tyr | Arg | Arg 190 | Ser | Trp |
| Glu | Lys | Arg 195 | Arg | Gly | Thr | Gly | Ser 200 | Met | Val | Ser | Asp | Thr 205 | Pro | Gly | Thr |
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| Val | Ser | Gln | Leu 20 | Pro | Gly | Pro | Ala | Gly 25 | Ala | Pro | Thr | Gly | Arg 30 | Arg | Gly |
| Gln | Ala | Glu 35 | Asp | Pro | Gly | Ser | Val 40 | Met | Ala | Ser | Ala | Leu 45 | Arg | Pro | Pro |
| Arg | Val 50 | Pro | Lys | Pro | Lys | Gly 55 | Val | Leu | Pro | Ser | His 60 | Tyr | Tyr | Glu | Ser |
| Phe 65 | Leu | Glu | Lys | Lys | Gly 70 | Pro | Cys | Asp | Arg | Asp 75 | Tyr | Lys | Lys | Phe | Trp 80 |
| Ala | Gly | Leu | Gln | Gly 85 | Leu | Thr | Ile | Tyr | Phe 90 | Tyr | Asn | Ser | Asn | Arg 95 | Asp |
| Phe | Gln | His | Val 100 | Glu | Lys | Leu | Asn 105 | Leu | Gly | Ala | Phe | Glu | Lys 110 | Leu | Thr |
| Asp | Glu | Ile 115 | Pro | Trp | Gly | Ser | Ser 120 | Arg | Asp | Pro | Gly | Thr 125 | His | Phe | Ser |
| Leu | Ile 130 | Leu | Arg | Asn | Gln | Glu 135 | Ile | Lys | Phe | Lys | Val 140 | Glu | Thr | Leu | Glu |
| Cys 145 | Arg | Glu | Met | Trp | Lys 150 | Gly | Phe | Ile | Leu | Thr 155 | Val | Val | Glu | Leu | Arg 160 |
| Val | Pro | Thr | Asp | Leu 165 | Thr | Leu | Leu | Pro | Gly 170 | His | Leu | Tyr | Met | Met 175 | Ser |
| Glu | Val | Leu | Ala 180 | Lys | Glu | Glu | Ala | Arg 185 | Arg | Ala | Leu | Glu | Thr 190 | Pro | Ser |
| Cys | Phe | Leu 195 | Lys | Val | Ser | Arg | Leu 200 | Glu | Ala | Gln | Leu | Leu 205 | Leu | Glu | Arg |
| Tyr | Pro 210 | Glu | Cys | Gly | Asn | Leu 215 | Leu | Leu | Arg | Pro | Ser 220 | Gly | Asp | Gly | Ala |
| Asp 225 | Gly | Val | Gly | His | His 230 | Ala | Ala | Asp | Ala | Gln 235 | Arg | Asp | Ala | Arg | Gly 240 |
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| Leu 1 | Thr | Thr | Ala | Ser 5 | Arg | Glu | Val | Gln | Glu 10 | Asn | Gly | Cys | Ser | Thr 15 | Ser |
| Ile | Thr | Tyr | Leu 20 | Gly | Pro | Leu | Pro | Leu 25 | His | Leu | Val | Met | Pro 30 | Asp | His |
| Val | Arg | Pro 35 | Val | Val | His | Leu | Pro 40 | Arg | Gly | Asp | Arg | His 45 | Arg | Arg | Arg |
| Arg | Pro 50 | Arg | Trp | Ala | Ala | Ala 55 | Ala | Gly | Ser | Arg | Thr 60 | Arg | Gly | Ser | Ala |
| Pro 65 | Gly | Ala | Val | Val | Pro 70 | Pro | Ala | Gly | Ser | Pro 75 | Ser | Gly | Ser | Thr | Arg 80 |
| Val | Ser | Pro | Val | His 85 | Gly | Ala | Pro | Pro | Leu 90 | Trp | Pro | Arg | Leu | Gln 95 | Thr |
| Ser | Cys | Ile | Gly 100 | Ala | Gln | Glu | Ala | Gly 105 | Ser | Ser | Arg | Ser | Gly 110 | His | Gly |
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| Arg | Ser | Gly | Val 20 | Thr | Ser | Gln | Gly | Ile 25 | His | Pro | Gly | Ser | Pro 30 | Trp | Cys |
| Cys | Thr | Pro 35 | Thr | Gln | Ala | Glu | Leu 40 | Ile | Val | Gly | Asp | Gln 45 | Ser | Gly | Ala |
| Ile | His 50 | Ile | Trp | Asp | Leu | Lys 55 | Thr | Asp | His | Asn | Glu 60 | Gln | Leu | Ile | Pro |
| Glu 65 | Pro | Glu | Val | Ser | Ile 70 | Thr | Ser | Ala | His | Ile 75 | Asp | Pro | Asp | Ala | Ser 80 |
| Tyr | Met | Ala | Ala | Val 85 | Asn | Ser | Thr | Gly | Asn 90 | Cys | Tyr | Val | Trp | Asn 95 | Leu |
| Thr | Gly | Gly | Ile 100 | Gly | Asp | Glu | Val | Thr 105 | Gln | Leu | Ile | Pro | Lys 110 | Thr | Lys |
| Ile | Pro | Ala 115 | His | Thr | Arg | Tyr | Ala 120 | Leu | Gln | Cys | Arg | Phe 125 | Ser | Pro | Asp |
| Ser | Thr 130 | Leu | Leu | Ala | Thr | Cys 135 | Ser | Ala | Asp | Gln | Thr 140 | Cys | Lys | Ile | Trp |
| Arg 145 | Thr | Ser | Asn | Phe | Ser 150 | Leu | Met | Thr | Glu | Leu 155 | Ser | Ile | Lys | Ser | Gly 160 |
| Asn | Pro | Gly | Glu | Ser 165 | Ser | Arg | Gly | Trp | Met 170 | Trp | Gly | Cys | Ala | Phe 175 | Ser |

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| Gly | Asp | Ser | Gln 180 | Tyr | Ile | Val | Thr | Ala 185 | Ser | Ser | Asp | Asn | Leu 190 | Ala | Arg |
| Leu | Trp | Cys 195 | Val | Glu | Thr | Gly | Glu 200 | Ile | Lys | Arg | Glu | Tyr 205 | Gly | Gly | His |
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| Phe 1 | Phe | Phe | Phe | Phe 5 | Phe | Phe | Phe | Phe | Pro 10 | Glu | Gln | His | Leu | Arg 15 | Val |
| Gly | Leu | Leu | Leu 20 | Leu | Pro | Pro | Arg | Leu 25 | Ser | Pro | Arg | Pro | Gly 30 | Pro | Ala |
| Trp | Pro | Val 35 | Pro | Asn | Pro | Val | Gly 40 | Trp | Pro | Gly | His | Leu 45 | His | Gln | Gly |
| Gly | Gln 50 | Leu | Leu | Ala | Gly | Thr 55 | Asn | Lys | Pro | Phe | His 60 | Leu | Ala | Met | Val |
| Val 65 | Val | Phe | Ser | Met | Asp 70 | Arg | Gly | Pro | Glu | Thr 75 | Arg | Ala | Gly | Arg | Gly 80 |
| Arg | Glu | His | Thr | Ser 85 | Leu | Gly | Val | Gly | Thr 90 | Ser | Leu | Arg | Pro | Leu 95 | Ser |
| Ser | Phe | Gly | Pro 100 | Ser | Ala | Asp | Phe | Pro 105 | Arg | Gln | Cys | Arg | Leu 110 | Ala | Gln |
| Ser | Arg | Ser 115 | Val | Gln | Pro | Gly | Leu 120 | Gly | Arg | Ala | Leu | Ser 125 | His | Leu | Asp |
| Lys | Gln 130 | Leu | Gly | Ala | Glu | Ser 135 | Pro | Arg | Ala | Ala | Trp 140 | Pro | Ser | Arg | Ser |
| Arg 145 | Arg | His | Arg | Gly | Pro 150 | Ser | Gly | Pro | Val | Ala 155 | Gln | Ala | Gly | Arg | Gly 160 |
| Gly | Ser | Ala | Leu | Thr 165 | Trp | Val | Leu | His | Gly 170 | Ser | Leu | Gln | Leu | Pro 175 | Pro |
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His

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| Pro | Gly | Cys | Cys | Met | Gly | Pro | Ser | Ser | Cys | His | His | Leu | His | Gln | Ala |
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| 1 | | | 5 | | | | | | 10 | | | | | 15 | | | |
|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|--|--|
| Val | Pro | Arg | Gly 20 | His | Arg | Leu | Ala | Gln 25 | His | Thr | Val | Ile | Glu 30 | Gly | Gln | | |
| Ala | Asp | Asn 35 | Ser | Leu | Leu | Val | Ala 40 | Ala | Ile | Leu | Ser | Leu 45 | Asp | Leu | Ser | | |
| Ser | Leu 50 | His | Thr | Pro | Glu | Pro 55 | Gly | Gln | Val | Val | Arg 60 | Gly | Ser | Ser | Asp | | |
| Asp 65 | Val | Leu | Gly | Val | Pro 70 | Arg | Glu | Gly | Ala | Ala 75 | Pro | His | Pro | Ala | Ala 80 | | |
| Gly | Gly | Leu | Pro | Gly 85 | Val | Ala | Ala | Leu | Asp 90 | Ala | Gln | Leu | Arg | His 95 | Gln | | |
| Gly | Glu | Val | Gly 100 | Arg | Pro | Pro | Asp | Leu 105 | Ala | Arg | Leu | Ile | Ser 110 | Arg | Ala | | |
| Gly | Gly | Glu 115 | Glu | Arg | Gly | Val | Gly 120 | Ala | Glu | Ala | Thr | Leu 125 | Gln | Gly | Val | | |
| Ala | Arg 130 | Val | Gly | Arg | Asp | Leu 135 | Ser | Leu | Gly | Asp | Glu 140 | Leu | Gly | His | Leu | | |
| Val 145 | Thr | Asn | Ala | Pro | Arg 150 | Gln | Ile | Pro | Asp | Ile 155 | Ala | Val | Ser | Gly | Ala 160 | | |
| Ile | Asp | Ser | Cys | His 165 | Val | Ala | Gly | Val | Gly 170 | Ile | Asp | Val | Gly | Gly 175 | Arg | | |
| Asp | Gly | Asp | Leu 180 | Gly | Leu | Arg | Asp | Gln 185 | Leu | Leu | Val | Val | Val 190 | Cys | Phe | | |
| Gln | Val | Pro 195 | Asp | Val | Asp | Ser | Pro 200 | Ala | Leu | Val | Thr | His 205 | Asp | Glu | Leu | | |
| Cys | Leu 210 | Gly | Trp | Gly | Ala | Ala 215 | Pro | Gly | Thr | Pro | Arg 220 | Val | Asn | Ala | Leu | | |
| Gly 225 | Gly | His | Thr | Gly | Pro 230 | Gln | His | Asp | Cys | Phe 235 | Leu | Gln | Val | Thr | Ser 240 | | |
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| Gly 1 | Asn | Ile | Pro | His 5 | Ser | Asn | Leu | Thr | Asp 10 | Ala | Ser | Ser | Pro | Lys 15 | Arg |
| Ile | Lys | Ile | Val 20 | Ala | Cys | Thr | Asp | Gln 25 | Glu | Asn | Ile | Leu | Gly 30 | Arg | Met |
| Lys | Tyr | Val 35 | Cys | Leu | Phe | Phe | Phe 40 | Lys | Asn | Lys | Gly | Phe 45 | Trp | Asn | Ser |

Gly Glu
50

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| Lys 1 | Gly | Asn | Gln | Leu 5 | Tyr | Gln | Gly | Glu | Thr 10 | Arg | Ala | Leu | Gly | Thr 15 | Met |
| Thr | Thr | Arg | Thr 20 | Ala | Phe | Ile | Leu | His 25 | His | Ser | Asp | Cys | Phe 30 | Gln | Ser |
| Ser | Asn | Asp 35 | Cys | Gln | Ala | Thr | Ser 40 | Gln | Met | Thr | Asp | Asn 45 | Phe | Cys | Cys |
| Ser | Phe 50 | Leu | Tyr | Lys | Met | Leu 55 | Arg | Gln | Gln | Ala | | | | | |

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| Asp 1 | Lys | Ile | Leu | Leu 5 | Ser | Pro | Arg | Met | Glu 10 | Cys | Ser | Gly | Met | Ile 15 | Met |
| Ala | His | Cys | Ser 20 | Leu | Asp | Leu | Pro | Gly 25 | Ser | His | Leu | Ser | Leu 30 | Pro | Ser |
| Ser | Trp | Asp 35 | His | Arg | His | Val | Pro 40 | Pro | Cys | Pro | Ala | Asn 45 | Phe | Tyr | Phe |
| Gly | Arg 50 | Asp | Lys | Val | Ser | Pro 55 | Cys | Cys | Leu | Gly | Arg 60 | Phe | Gln | Thr | Pro |
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| Thr | Gln | Ser | Pro 20 | Leu | Ser | His | Ser | Ala 25 | Ser | Asn | Gly | Ser | Thr 30 | Thr | Lys |
| Val | Ala | Gln 35 | Gln | Met | Arg | Arg | Ala 40 | Ala | Ala | Val | Val | Gly 45 | Glu | Ser | Thr |
| Glu | Glu 50 | Thr | Arg | Leu | Gly | Arg 55 | Ala | Leu | Gly | Ala | Ala 60 | Gly | Phe | Thr | Asn |

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| Lys 65 | Gln | Leu | Ser | Glu | Asn 70 | Thr | Ala | Gln | Gly | Glu 75 | Glu | Lys | Arg | Val | Met 80 |
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| Cys 1 | Ala | Tyr | Arg | Thr 5 | Glu | Lys | Trp | Lys | Ser 10 | His | Thr | Val | Pro | Cys 15 | Ser |
| Pro | Glu | Val | Lys 20 | Leu | Val | Leu | Thr | Leu 25 | Ala | Leu | Arg | Ala | Phe 30 | Ser | Ser |
| Met | Glu | Pro 35 | Leu | Gly | Leu | Gly | Arg 40 | Lys | Ala | Arg | Val | Ser 45 | Ala | His | Arg |
| His | Thr 50 | Ser | Tyr | Leu | Gln | Asp 55 | Ile | Asp | Cys | Leu | Cys 60 | Arg | Gly | Ser | Thr |
| Gly 65 | Gln | Pro | Thr | Ala | Asn 70 | Thr | Ala | Ala | Ser | Leu 75 | Val | Ser | Ala | Ser | Leu 80 |
| Leu | Pro | Val | His | Pro 85 | Gly | Asp | Tyr | Ser | Trp 90 | Ile | Asn | Leu | Pro | Lys 95 | Asn |
| Ser | Ala | Phe | Ile 100 | Met | Ser | Leu | Phe | Cys 105 | Ser | Lys | Thr | Gln | Asn 110 | Gly | Ser |
| Leu | Pro | Pro 115 | Arg | Gly | Arg | Pro | Ser 120 | His | His | Cys | Ile | Pro 125 | Asn | Arg | |

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| Pro 1 | Tyr | Val | His | Ser 5 | Pro | Ala | Trp | Ser | Pro 10 | Trp | Gly | Leu | Val | Gly 15 | Arg |
| Leu | Val | Ser | Val 20 | His | Thr | Asp | Ile | Pro 25 | Ala | Thr | Phe | Arg | Thr 30 | Leu | Ile |
| Val | Ser | Ala 35 | Glu | Val | Ala | Leu | Gly 40 | Ser | Gln | Leu | Gln | Thr 45 | Gln | Gln | Pro |
| Pro | Trp 50 | Phe | Gln | Leu | Leu | Ser 55 | Phe | Gln | Tyr | Ile | Leu 60 | Glu | Thr | Thr | Pro |
| Gly 65 | Leu | Ile | Phe | Leu | Arg 70 | Thr | Gln | His | Ser | Leu 75 | Cys | His | Phe | Ser | Val 80 |
| Arg | Lys | Pro | Lys | Met 85 | Ala | Pro | Cys | His | Leu 90 | Glu | Ala | Asp | Gln | Val 95 | Ile |
| Thr | Val | Ser | Pro 100 | Thr | Ala | Ser | Thr | Val 105 | Cys | Ile | Trp | Tyr | Ile 110 | Val | Gln |

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| Asn 1 | Leu | His | Ser | Asn 5 | Ile | Lys | Val | Phe | Phe 10 | Tyr | Asn | Val | Pro | Lys 15 | Ile |
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| Gly | Asn | Asn | Cys 20 | Arg | Gly | Ile | Leu | Gln 25 | Leu | Ile | His | Thr | Gln 30 | His | Leu |
| Leu | His | Thr 35 | Val | Phe | Thr | Asp | Ser 40 | Asn | Leu | Val | Gly | | | | |

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| Asn 1 | Val | Asp | Phe | Arg 5 | Cys | Lys | Asn | Met | Leu 10 | Glu | Ile | Arg | Phe | Ser 15 | Ala |
| Ile | Lys | Pro | Asn 20 | Thr | Lys | Lys | Ile | Lys 25 | Lys | Asn | Val | Cys | Gln 30 | Lys | Pro |

Asn Ser

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<400> 369

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| Gln 1 | Pro | Ser | Ser | Leu 5 | Leu | His | His | Cys | Pro 10 | Tyr | Pro | Tyr | Pro | Pro 15 | Arg |
| His | Leu | Leu | Ala 20 | Thr | Pro | Leu | Leu | Lys 25 | Pro | Gln | Leu | Leu | Ala 30 | Gly | Ser |
| Pro | Ala | His 35 | Ala | Ser | Leu | Ile | Ser 40 | Phe | Leu | Ala | Ser | Pro 45 | Gln | Arg | Ala |

| | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|
| Ser | Arg | Gln | His | Gly | Gly | Pro | Ser | Gln | Arg | Ala | Gly | Thr | Leu | Ser | Cys | |
| | 50 | | | | | 55 | | | | | 60 | | | | | |
| Pro | Leu | Val | Glu | Leu | Gly | Gly | Ser | Ser | Gly | Gly | Arg | Gly | Leu | Cys | His | |
| 65 | | | | | 70 | | | | | 75 | | | | | 80 | |
| Gly | Ser | Ala | Asp | Pro | Thr | Asn | Arg | Ala | Ala | Glu | Pro | Gln | Glu | Arg | Gly | |
| | | | | 85 | | | | | 90 | | | | | 95 | | |
| Glu | Pro | Ala | Ala | Gly | Asp | Arg | Arg | Pro | Leu | Pro | Glu | Trp | Gly | Arg | Val | |
| | | | 100 | | | | | 105 | | | | | 110 | | | |
| Ser | Leu | Ala | Glu | Ser | Pro | Gly | Ala | Glu | Phe | Arg | Cys | Pro | Gly | Ser | Leu | |
| | | 115 | | | | | 120 | | | | | 125 | | | | |
| Gly | Glu | Trp | Gly | Glu | Ile | Pro | Glu | Lys | Glu | Ser | Ser | Ala | His | Pro | Lys | |
| | 130 | | | | | 135 | | | | | 140 | | | | | |
| Thr | Glu | Glu | | | | | | | | | | | | | | |
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| Asn | His | Ser | Cys | Trp | Gln | Gly | Pro | Gln | Leu | Met | Pro | Ala | Ser | Ser | Pro | |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | | |
| Phe | Leu | Leu | Ala | Pro | Lys | Gly | Pro | Pro | Gly | Asn | Met | Gly | Gly | Pro | Val | |
| | | | 20 | | | | | 25 | | | | | 30 | | | |
| Arg | Glu | Pro | Ala | Leu | Ser | Val | Ala | Leu | Trp | Leu | Ser | Trp | Gly | Ala | Ala | |
| | | 35 | | | | | 40 | | | | | 45 | | | | |
| Leu | Gly | Ala | Val | Ala | Cys | Ala | Met | Ala | Leu | Leu | Thr | Gln | Gln | Thr | Glu | |
| | 50 | | | | | 55 | | | | | 60 | | | | | |
| Leu | Gln | Ser | Leu | Arg | Arg | Glu | Val | Ser | Arg | Leu | Gln | Gly | Thr | Gly | Gly | |
| 65 | | | | | 70 | | | | | 75 | | | | | 80 | |
| Pro | Ser | Gln | Asn | Gly | Glu | Gly | Tyr | Pro | Trp | Gln | Ser | Leu | Pro | Glu | Gln | |
| | | | | 85 | | | | | 90 | | | | | 95 | | |
| Ser | Ser | Asp | Ala | Leu | Glu | Ala | Trp | Glu | Ser | Gly | Glu | Arg | Ser | Arg | Lys | |
| | | | 100 | | | | | 105 | | | | | 110 | | | |
| Arg | Arg | Ala | Val | Leu | Thr | Gln | Lys | Gln | Lys | Asn | Asp | Ser | Asp | Val | Thr | |
| | | 115 | | | | | 120 | | | | | 125 | | | | |
| Glu | Val | Met | Trp | Gln | Pro | Ala | Leu | Arg | Arg | Gly | Arg | Gly | Leu | Gln | Ala | |
| | 130 | | | | | 135 | | | | | 140 | | | | | |
| Gln | Gly | Tyr | Gly | Val | Arg | Ile | Gln | Asp | Ala | Gly | Val | Tyr | Leu | Leu | Tyr | |
| 145 | | | | | 150 | | | | | 155 | | | | | 160 | |
| Ser | Gln | Val | Leu | Phe | Gln | Asp | Val | Thr | Phe | Thr | Met | Gly | Gln | Val | Val | |
| | | | | 165 | | | | | 170 | | | | | 175 | | |
| Ser | Arg | Glu | Gly | Gln | Gly | Arg | Gln | Glu | Thr | Leu | Phe | Arg | Cys | Ile | Arg | |
| | | | 180 | | | | | 185 | | | | | 190 | | | |

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ser | Met | Pro | Ser | His | Pro | Asp | Arg | Ala | Tyr | Asn | Ser | Cys | Tyr | Ser | Ala |
| | | 195 | | | | | 200 | | | | | 205 | | | |
| Gly | Val | Phe | His | Leu | His | Gln | Gly | Asp | Ile | Leu | Ser | Val | Ile | Ile | Pro |
| | 210 | | | | | 215 | | | | | 220 | | | | |
| Arg | Ala | Arg | Ala | Lys | Leu | Asn | Leu | Ser | Pro | His | Gly | Thr | Phe | Leu | Gly |
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| Phe | Val | Lys | Leu | | | | | | | | | | | | |

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<400> 371

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| Thr | Pro | Ala | Ser | Trp | Ile | Arg | Thr | Pro | Tyr | Pro | Trp | Ala | Cys | Arg | Pro |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Leu | Pro | Arg | Leu | Arg | Ala | Gly | Cys | His | Ile | Thr | Ser | Val | Thr | Ser | Glu |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Ser | Phe | Phe | Cys | Phe | Trp | Val | Ser | Thr | Ala | Leu | Leu | Phe | Arg | Asp | Leu |
| | | 35 | | | | | 40 | | | | | 45 | | | |
| Ser | Pro | Leu | Ser | Gln | Ala | Ser | Arg | Ala | Ser | Glu | Leu | Cys | Ser | Gly | Arg |
| | 50 | | | | | 55 | | | | | 60 | | | | |
| Leu | Cys | Gln | Gly | Tyr | Pro | Ser | Pro | Phe | Trp | Glu | Gly | Pro | Pro | Val | Pro |
| 65 | | | | | 70 | | | | | 75 | | | | | 80 |
| Cys | Ser | Arg | Leu | Thr | Ser | Leu | Leu | Arg | Leu | Cys | Ser | Ser | Val | Cys | Trp |
| | | | | 85 | | | | | 90 | | | | | 95 | |
| Val | Ser | Arg | Ala | Met | Ala | Gln | Ala | Thr | Ala | Pro | Arg | Ala | Ala | Pro | Gln |
| | | | 100 | | | | | 105 | | | | | 110 | | |
| Leu | Asn | Gln | Arg | Ala | Thr | Glu | Ser | Ala | Gly | Ser | Leu | Thr | Gly | Pro | Pro |
| | | 115 | | | | | 120 | | | | | 125 | | | |
| Met | Leu | Pro | Gly | Gly | Pro | Leu | Gly | Ala | Ser | Lys | Lys | Gly | Asp | Glu | Ala |
| | 130 | | | | | 135 | | | | | 140 | | | | |
| Gly | Met | Ser | Trp | Gly | Pro | Cys | Gln | Gln | Leu | Trp | Phe | Gln | Glu | Trp | Gly |
| 145 | | | | | 150 | | | | | 155 | | | | | 160 |
| Ser | Lys | Glu | Val | Ala | Gly | Arg | Val | Arg | Val | Arg | Ala | Val | Val | Gln | Lys |
| | | | | 165 | | | | | 170 | | | | | 175 | |
| Gly | Arg | Arg | Leu | Leu | Arg | Lys | Glu | Lys | | | | | | | |
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| Val | Leu | Tyr | His | Cys | Ala | Ser | Arg | Tyr | Arg | Arg | Arg | Ala | Arg | Gln | Thr |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|

| 1 | | | | 5 | | | | 10 | | | | 15 | | | |
|------------|------------|------------|------------|-----------|-----------|------------|------------|------------|-----------|-----------|------------|------------|------------|-----------|-----------|
| Cys | Ala | Pro | Ser 20 | Tyr | Thr | Arg | Ser | Ala 25 | Asp | Leu | Pro | Ser | Arg 30 | Thr | Pro |
| Pro | Val | Glu 35 | Asp | Leu | Leu | Glu | Leu 40 | Ser | Arg | Ala | Phe | Trp 45 | Val | Gly | Ala |
| Asp | Gly 50 | Gly | Gly | Arg | Val | Arg 55 | Val | Leu | Gly | Gly | Thr 60 | Glu | Ala | His | Glu |
| Asp 65 | Gly | Ile | Pro | Pro | Glu 70 | Ser | Met | Asp | His | Tyr 75 | Ala | Asp | Gly | His | Arg 80 |
| Pro | Gln | His | Cys | His 85 | Leu | Gly | Tyr | Arg | Cys 90 | His | Gly | Arg | Pro | Gln 95 | Arg |
| Glu | Gly | Leu | Pro 100 | Arg | Cys | Leu | Lys | Val 105 | Pro | Pro | Val | Asn | Leu 110 | Ser | Ser |
| Val | Ser | Val 115 | Pro | Phe | Pro | Val | Thr 120 | His | Arg | Ala | Gly | Met 125 | Glu | Phe | Asn |
| Gly | Cys 130 | Ser | Gly | Gln | Thr | Leu 135 | Val | His | Gly | Gln | Thr 140 | Ser | Leu | Leu | Trp |
| Ile 145 | Leu | Gln | Asp | | | | | | | | | | | | |

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<212> PRT

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<400> 373

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| Cys 1 | Leu | Pro | Val | Arg 5 | Arg | Leu | Arg | Gln | Phe 10 | Glu | Pro | Lys | Thr | Pro 15 | Lys |
| Val | Glu | Ala | Glu 20 | Phe | Gln | Ser | Met | Gly 25 | Ser | Arg | Leu | Ser | Gln 30 | Pro | Phe |
| Glu | Ser | Tyr 35 | Ile | Thr | Ala | Pro | Pro 40 | Gly | Thr | Ala | Ala | Ala 45 | Pro | Ala | Lys |
| Pro | Ala 50 | Pro | Pro | Ala | Thr | Pro 55 | Gly | Ala | Pro | Thr | Ser 60 | Pro | Ala | Glu | His |
| Arg 65 | Leu | Leu | Lys | Thr | Cys 70 | Trp | Ser | Cys | Arg | Val 75 | Leu | Ser | Gly | Leu | Gly 80 |
| Leu | Met | Gly | Ala | Gly 85 | Gly | Tyr | Val | Tyr | Trp 90 | Val | Ala | Arg | Lys | Pro 95 | Met |
| Lys | Met | Gly | Tyr 100 | Pro | Pro | Ser | Pro | Trp 105 | Thr | Ile | Thr | Gln | Met 110 | Val | Ile |
| Gly | Leu | Ser 115 | Ile | Ala | Thr | Trp | Gly 120 | Ile | Val | Val | Met | Ala 125 | Asp | Pro | Lys |
| Gly | Lys 130 | Ala | Tyr | Arg | Val | Val | | | | | | | | | |

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| Ile 1 | Pro | Cys | Leu | Leu 5 | Cys | Val | Ser | Arg | Gly 10 | Lys | Gly | Gln | Arg | Gln 15 | Lys |
| Thr | Asp | Ser | Leu 20 | Val | Val | Leu | Ser | Asn 25 | Asn | Ala | Val | Gly | Leu 30 | Pro | Phe |
| Gly | Val | Cys 35 | His | Asp | Asn | Asp | Thr 40 | Pro | Gly | Gly | Asn | Ala 45 | Glu | Ala | Asp |
| Asp | His 50 | Leu | Arg | Asn | Gly | Pro 55 | Trp | Thr | Arg | Gly | Val 60 | Ser | His | Leu | His |
| Gly 65 | Leu | Pro | Cys | His | Pro 70 | Val | His | Val | Pro | Ala 75 | Arg | Pro | His | Gln | Pro 80 |
| Gln | Pro | Arg | Lys | His 85 | Ala | Thr | Ala | Pro | Ala 90 | Gly | Leu | Gln | Gln | Ala 95 | Val |
| Phe | Cys | Trp | Gly 100 | Gly | Arg | Arg | Ser | Gly 105 | Cys | Ser | Trp | Gly | Arg 110 | Arg | Phe |
| Gly | Gly | Arg 115 | Gly | Gly | Gly | Thr | Gly 120 | Arg | Arg | Ser | Asp | Ile 125 | Gly | Leu | Lys |
| Arg | Leu 130 | Gly | Gln | Pro | Arg | Pro 135 | His | Ala | Leu | Glu | Leu 140 | Gly | Leu | Asn | Leu |
| Gly 145 | Arg | Leu | Trp | Phe | Lys 150 | Leu | Ala | | | | | | | | |

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| Gly 1 | Ala | Glu | Leu | Gln 5 | Leu | Arg | Ser | Cys | Ala 10 | Met | Ala | Val | Ser | Gln 15 | Glu |
| Gly | Leu | Asp | Gly 20 | Glu | Val | Lys | Ala | Pro 25 | Asp | Ala | Arg | Ile | Phe 30 | Ile | Pro |
| Cys | Ala | Asn 35 | Thr | Ala | Phe | Thr | Pro 40 | Asp | Leu | Gln | Val | Leu 45 | Gln | Gln | Val |
| Leu | Ser 50 | Ser | Phe | Thr | Val | Ser 55 | Ser | Pro | Leu | Phe | His 60 | Ser | Gly | Phe | Ile |
| Cys 65 | Tyr | Thr | Pro | Asn | Leu 70 | Phe | Ser | Gln | Ser | Thr 75 | Pro | Gln | Ser | Leu | Pro 80 |
| Cys | Trp | Gly | Gln | His 85 | Arg | Lys | Arg | Gln | Asn 90 | Leu | Arg | Lys | Glu | Lys 95 | Gly |
| Asn | Leu | Gln | Pro | Ala | Met | Asp | Leu | Met | Ile | Pro | | | | | |

100

105

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<400> 376

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| Ile 1 | Pro | Lys | Asn | Phe 5 | Tyr | His | Asn | Ile | His 10 | Arg | Ser | Leu | Tyr | Gln 15 | Leu |
| Tyr | Leu | Glu | Val 20 | Lys | Gln | Ala | Trp | Glu 25 | Ser | Ile | Asp | Cys | Ser 30 | Ala | Cys |
| Pro | Arg | Val 35 | Glu | Ala | Leu | Asn | Lys 40 | Ala | Thr | Lys | Thr | Pro 45 | Glu | Ile | Thr |
| Asp | Leu 50 | Thr | Phe | Gln | Trp | Pro 55 | Thr | Gly | Pro | Gly | Ser 60 | Gly | Gln | Val | Gly |
| His 65 | Gln | Ala | Asn | His | Leu 70 | Phe | Pro | Cys | Ala | Ser 75 | Leu | Cys | Lys | Ser | Trp 80 |
| Ser | Val | Pro | Leu | Ala 85 | Arg | Pro | Ser | Leu | Val 90 | Gln | Asp | Leu | Gly | Pro 95 | Gln |
| Thr | Lys | Glu | Ser 100 | Arg | Gly | Leu | Gly | Phe 105 | Pro | Asp | Pro | Arg | Met 110 | Val | Ser |
| Leu | | | | | | | | | | | | | | | |

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| Phe 1 | Gly | Gly | Pro | Gln 5 | Ala | Gln | Pro | His | Ser 10 | Ala | Val | Gly | Ser | Ser 15 | Leu |
| Ser | Ser | Gln | Ile 20 | Gln | Val | Asn | Leu | Ser 25 | Phe | Lys | Asn | Lys | Gly 30 | Glu | Pro |
| Gln | Thr | Cys 35 | Ser | Thr | Thr | Arg | Asp 40 | Asn | Asn | Thr | Pro | Trp 45 | Gln | Glu | Asp |
| His 50 | Val | Leu | Asp | Cys | Leu | Arg 55 | Thr | Ala | Thr | Val | Arg 60 | Gln | Glu | Ala | Cys |
| Cys 65 | Asp | Pro | Leu | Cys | Ser 70 | Met | Pro | Ile | Ala | Gln 75 | Ala | Ser | Ser | Ile | Pro 80 |
| Tyr | His | Leu | Pro | Pro 85 | Met | Leu | Phe | Phe | Gly 90 | Thr | Thr | Thr | Leu | Ala 95 | Lys |
| Arg | Glu | Tyr | Gly 100 | Lys | Gln | Arg | Pro | Arg 105 | Ala | Leu | Leu | Gln | Tyr 110 | Arg | His |
| Phe | Glu | Val 115 | Gly | Arg | Gln | His | Met 120 | Leu | His | Ser | Lys | | | | |

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| His | Lys | Ile | Ile | Leu | Ile | Ser | Arg | Tyr | Arg | Arg | Asn | Ser | Val | Val | Thr |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Cys | Gln | Ala | Ile | Leu | Tyr | Thr | Pro | Met | Ile | Leu | Gln | Arg | Lys | His | Pro |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Ser | Leu | Leu | Leu | Pro | Leu | Leu | Trp | Gln | Leu | Lys | Cys | Ile | Cys | Ser | Ser |
| | | 35 | | | | | 40 | | | | | 45 | | | |
| Thr | Leu | Lys | Arg | Arg | Lys | Arg | Asn | Asn | Leu | Ser | Leu | Ile | Pro | Lys | Leu |
| | 50 | | | | | 55 | | | | | 60 | | | | |
| Pro | His | | | | | | | | | | | | | | |
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| Pro | Glu | Lys | Ser | Pro | Gly | Ala | Gly | Pro | Leu | Leu | Gly | Gly | Ser | Pro | Phe |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Phe | Phe | Phe | Phe | Tyr | Val | Ser | Lys | Ser | Thr | Glu | Phe | Ile | Leu | Lys | His |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Ser | Ile | Lys | Phe | Glu | Ser | His | Glu | Thr | Lys | Ala | Ser | Leu | His | Tyr | Met |
| | | 35 | | | | | 40 | | | | | 45 | | | |
| Leu | Ile | Leu | Ala | Lys | Ser | Lys | Asp | Gln | His | Thr | Ile | Asp | Ile | His | Asp |
| | 50 | | | | | 55 | | | | | 60 | | | | |
| Asn | Val | Val | | | | | | | | | | | | | |
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| Phe | Cys | Ile | His | Phe | Glu | Cys | Leu | His | Val | Lys | Thr | Gln | Leu | Ile | Tyr |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Tyr | Phe | Asn | Ile | Lys | Pro | Ile | Ser | Phe | Glu | Ala | Lys | Leu | Ile | Leu | Leu |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Phe | Tyr | Lys | Ser | Asn | Gly | Asp | Ser | Phe | Phe | Arg | Met | Leu | Lys | Ala | Gln |
| | | 35 | | | | | 40 | | | | | 45 | | | |
| Cys | Leu | Arg | Phe | Met | Leu | Ala | Ala | Leu | Leu | Ala | Leu | Leu | Leu | Pro | Glu |
| | 50 | | | | | 55 | | | | | 60 | | | | |

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<400> 381

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| Met | Asp | Gly | Ala | Gln | Gly | Arg | Leu | Leu | Pro | Val | Ser | Ser | Arg | His | Ser |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Asn | Leu | Ala | Leu | Leu | Lys | Pro | Thr | Ser | Arg | Asp | Leu | Thr | Ala | Pro | Pro |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Glu | Gly | Ala | Ser | Leu | Met | Thr | Val | Gly | Gly | Ile | Thr | Ala | Pro | Arg | Asp |
| | | 35 | | | | | 40 | | | | | 45 | | | |
| Val | Gln | Val | Trp | Asn | Pro | Arg | Thr | Trp | Glu | Ser | Val | Thr | Leu | Arg | Gly |
| | 50 | | | | | 55 | | | | | 60 | | | | |
| Lys | Arg | Asp | Pro | Ala | Pro | Val | Leu | Gln | Phe | Arg | Ile | Ser | Trp | Trp | Gly |
| 65 | | | | | 70 | | | | | 75 | | | | | 80 |
| Asp | Asp | Arg | Gly | Trp | Leu | Arg | Trp | Ala | Leu | Ser | Asn | His | Gly | Gly | Pro |
| | | | | 85 | | | | | 90 | | | | | 95 | |
| Tyr | Lys | Gly | Arg | Gly | Val | Thr | Arg | Val | Cys | Ala | | | | | |
| | | | 100 | | | | | 105 | | | | | | | |

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<400> 382

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| Glu | Val | Glu | Asn | His | Thr | Asn | Leu | Leu | Ser | Tyr | Ser | Ser | Arg | Gly | Gln |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Glu | Ser | Lys | Met | Val | Phe | Thr | Arg | Leu | Lys | Ser | Cys | Gln | Cys | Gly | Phe |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Val | Ser | Pro | Arg | Arg | Leu | Trp | Gly | Arg | Ile | Gln | Cys | Leu | Phe | Gln | Leu |
| | | 35 | | | | | 40 | | | | | 45 | | | |
| Leu | Gln | Gly | Pro | Pro | His | Arg | Leu | Ala | Pro | Gly | Leu | Leu | Ala | Ile | Phe |
| | 50 | | | | | 55 | | | | | 60 | | | | |
| Thr | Ala | Arg | Ser | Phe | Leu | Ala | Ser | Cys | Ala | Asp | Pro | Arg | Asp | Ser | Pro |
| 65 | | | | | 70 | | | | | 75 | | | | | 80 |
| Ser | Leu | Ile | Arg | Ala | Pro | Met | Ile | Thr | Gln | Gly | Pro | Pro | Gln | Pro | Ser |
| | | | | 85 | | | | | 90 | | | | | 95 | |
| Thr | Val | Ile | Ser | Pro | Pro | Arg | Asn | Pro | Glu | Leu | Lys | His | Arg | Arg | Arg |
| | | | 100 | | | | | 105 | | | | | 110 | | |
| Val | Pro | Phe | Ala | Thr | Gln | Gly | Asn | Thr | Phe | Pro | Arg | Pro | Gly | Val | Pro |
| | | 115 | | | | | 120 | | | | | 125 | | | |
| Asn | Leu | Asp | Ile | Ser | Gly | Gly | Cys | Tyr | Ser | Thr | His | Arg | His | Gln | |

130

135

140

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 <212> PRT
 <213> homo sapiens

<400> 383

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| Ser 1 | His | Thr | His | Ala 5 | Gln | Leu | Ser | Asn | His 10 | Gly | Gly | Val | Gln | Glu 15 | Pro |
| Pro | Leu | Pro | Leu 20 | Gly | Val | Pro | Lys | Pro 25 | Trp | Gly | Ser | Asp | Ser 30 | Gly | Ala |
| Leu | Ser | Arg 35 | Pro | Gly | Cys | Lys | Leu 40 | Lys | Thr | Pro | Gly | Gly 45 | Phe | Gln | Asn |
| Ala | Gln 50 | Cys | Leu | Gly | His | Asn 55 | Leu | Asp | Gln | Leu | Asn 60 | Leu | Asn | Leu | Gln |
| Arg 65 | Asp | Ile | Thr | Ala | Pro 70 | Gln | Glu | Thr | Pro | Arg 75 | Gly | Ser | Gln | Ser | Ala 80 |
| Lys | Pro | Glu | Glu | Thr 85 | Ile | | | | | | | | | | |

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 <213> homo sapiens

<400> 384

| | | | | | | | | | | | | | | | |
|-----------|-----------|------------|------------|-----------|-----------|-----------|------------|------------|-----------|-----------|-----------|-----------|------------|-----------|-----------|
| Leu 1 | Glu | Pro | Ile | Arg 5 | Phe | Gln | Gln | Lys | Val 10 | Met | Glu | Lys | Glu | Thr 15 | Glu |
| Lys | Arg | Ile | Ser 20 | Glu | Ile | Glu | Asp | Ala 25 | Ala | Phe | Leu | Ala | Arg 30 | Glu | Lys |
| Ala | Lys | Gln 35 | Asp | Ala | Glu | Tyr | Tyr 40 | Ala | Ala | His | Lys | Tyr 45 | Ala | Thr | Ser |
| Asn | Lys 50 | His | Lys | Leu | Thr | Pro 55 | Glu | Tyr | Leu | Glu | Leu 60 | Lys | Lys | Tyr | Gln |
| Ala 65 | Ile | Ala | Ser | Asn | Ser 70 | Lys | Ile | Tyr | Phe | Gly 75 | Ser | Asn | Ile | Pro | Asn 80 |
| Met | Phe | Val | Asp | Ser 85 | Ser | Cys | Ala | Leu | Lys 90 | Tyr | Ser | Asp | Ile | Arg 95 | Thr |
| Gly | Arg | Glu | Ser 100 | Ser | Leu | Pro | Ser | Lys 105 | Glu | Ala | Leu | Glu | Pro 110 | Ser | Gly |
| Glu | Asn | Val 115 | Ile | Gln | Asn | Lys | Glu 120 | Ser | Thr | Gly | | | | | |

<210> 385
 <211> 83
 <212> PRT
 <213> homo sapiens

<400> 385

| | | | | | | | | | | | | | | | |
|-----------|-----------|-----------|-----------|----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Asp 1 | Asn | Ser | Cys | Val 5 | Arg | Tyr | Val | Glu | Ala 10 | Gln | Gln | Lys | Ser | His 15 | Gly |
| Thr | Thr | Ser | Arg 20 | Asn | Leu | Ser | Ala | Val 25 | Arg | Pro | Val | Ser | Leu 30 | Met | Thr |
| Val | Cys | Trp 35 | Leu | Cys | Gln | Thr | Leu 40 | Tyr | Leu | Gly | Lys | Glu 45 | Ser | Pro | Asp |
| Leu | Asn 50 | Gly | Ser | Phe | Pro | Trp 55 | Ala | Leu | Ser | Tyr | Arg 60 | Gly | Ile | Cys | Asn |
| Met 65 | Glu | Lys | Ile | Ile | Phe 70 | His | Phe | Cys | Ser | Phe 75 | Asn | Ser | Ile | Asn | Ser 80 |
| Leu | Tyr | Lys | | | | | | | | | | | | | |

<210> 386

<211> 88

<212> PRT

<213> homo sapiens

<400> 386

| | | | | | | | | | | | | | | | |
|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Cys 1 | Leu | Thr | Phe | Gln 5 | Cys | Arg | Gln | Tyr | Leu 10 | Ser | Ile | Arg | Leu | Ser 15 | Ser |
| Phe | Met | Ser | Ser 20 | Ser | Leu | Glu | Arg | Asn 25 | Thr | Tyr | Arg | Ile | Leu 30 | Asp | Lys |
| Thr | Val | Ala 35 | Glu | Lys | Thr | Ile | Cys 40 | Val | Ser | Asp | Ser | Trp 45 | Leu | Tyr | Pro |
| Pro | Ile 50 | Ser | Gly | Ala | Pro | Arg 55 | Thr | Ile | Ala | Gly | Glu 60 | Val | Glu | Gln | Met |
| Lys 65 | Cys | Lys | Phe | Ser | Val 70 | Asn | Leu | Lys | Ser | Pro 75 | Tyr | Asn | Asp | Cys | Ser 80 |
| His | Leu | Thr | Pro | Trp 85 | Ala | Thr | Ser | | | | | | | | |

<210> 387

<211> 105

<212> PRT

<213> homo sapiens

<400> 387

| | | | | | | | | | | | | | | | |
|----------|-----------|-----------|-----------|----------|-----|-----------|-----------|-----------|-----------|-----|-----------|-----------|-----------|-----------|-----|
| Thr 1 | Cys | Glu | Pro | Phe 5 | Arg | Asn | Pro | Gln | Val 10 | Gly | Lys | Asp | Pro | Thr 15 | Pro |
| Ser | Leu | Arg | Ile 20 | Ile | Cys | Leu | Ala | Ile 25 | Thr | Gly | Ser | Trp | Lys 30 | Cys | Phe |
| Leu | Gly | Cys 35 | Val | Lys | Ile | Asn | Gln 40 | Gly | Gly | Met | Lys | His 45 | Ile | Phe | Leu |
| Ala | Thr 50 | Lys | Leu | Glu | Phe | Leu 55 | Arg | Glu | Gln | Met | Gln 60 | Arg | Asp | Leu | Leu |

| | | | | | | | | | | | | | | | |
|-----------|-----|-----|------------|-----------|-----------|-----|-----|------------|-----------|-----------|-----|-----|-----|-----------|-----------|
| Leu 65 | Leu | Ala | Arg | Leu | Gln 70 | Gly | Pro | Leu | Trp | Ser 75 | His | Thr | Glu | Ala | Val 80 |
| Thr | Gly | His | Lys | Pro 85 | Arg | Arg | Ala | Arg | Gly 90 | Ser | Cys | Ala | Glu | Ala 95 | Pro |
| Gly | Pro | Leu | Ser 100 | Gly | Ser | Phe | Pro | Ser 105 | | | | | | | |

<210> 388

<211> 173

<212> PRT

<213> homo sapiens

<400> 388

| | | | | | | | | | | | | | | | |
|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|-----------|------------|
| Ala 1 | Gln | Glu | Ser | Pro 5 | Trp | Gln | Leu | Cys | Arg 10 | Gly | Ala | Arg | Thr | Ser 15 | Lys |
| Arg | Lys | Leu | Pro 20 | Lys | Leu | Gly | Met | Glu 25 | Gln | His | Cys | Asn | Glu 30 | Met | Cys |
| Pro | Pro | Ser 35 | Ser | Leu | Phe | Leu | Pro 40 | Gly | Ala | Tyr | Lys | Ala 45 | Gln | Met | Tyr |
| Ser | Asp 50 | Val | Trp | Thr | Asn | Thr 55 | Lys | Lys | Lys | Lys | Lys 60 | Lys | Lys | Lys | Lys |
| Lys 65 | Ala | Phe | Leu | Ser | His 70 | Arg | His | Lys | Thr | Gln 75 | Ile | Ile | Tyr | Cys | Tyr 80 |
| Glu | Ala | Leu | Phe | Thr 85 | Asn | Gly | Gln | Phe | Leu 90 | His | Phe | Ile | Ala | Ala 95 | Cys |
| Glu | Arg | Leu | Pro 100 | Asp | Gly | Arg | Pro | Ile 105 | Ser | Leu | Val | Leu | Gln 110 | Thr | Ser |
| Ser | Gln | Ala 115 | Ala | Phe | Tyr | Gln | Lys 120 | Gly | Glu | Asn | Ser | Cys 125 | Leu | Ser | Phe |
| Leu | Lys 130 | Asn | Ala | Phe | Leu | Tyr 135 | Leu | Ser | Ile | Arg | His 140 | Tyr | Thr | Ser | Glu |
| Leu 145 | Tyr | Lys | Arg | Pro | Gly 150 | Gly | Thr | Met | Ser | Leu 155 | Val | Asp | Thr | Phe | His 160 |
| Cys | Ser | Val | Ala | Pro 165 | Phe | Leu | Ala | Trp | Glu 170 | Ala | Ser | Ala | | | |

<210> 389

<211> 105

<212> PRT

<213> homo sapiens

<400> 389

| | | | | | | | | | | | | | | | |
|----------|-----|-----|-----------|----------|-----|-----|-----|-----------|-----------|-----|-----|-----|-----------|-----------|-----|
| Thr 1 | Cys | Glu | Pro | Phe 5 | Arg | Asn | Pro | Gln | Val 10 | Gly | Lys | Asp | Pro | Thr 15 | Pro |
| Ser | Leu | Arg | Ile 20 | Ile | Cys | Leu | Ala | Ile 25 | Thr | Gly | Ser | Trp | Lys 30 | Cys | Phe |
| Leu | Gly | Cys | Val | Lys | Ile | Asn | Gln | Gly | Gly | Met | Lys | His | Ile | Phe | Leu |

| 35 | | | | | 40 | | | | | 45 | | | | | |
|-----------|-----------|-----|------------|-----------|-----------|-----------|-----|------------|-----------|-----------|-----------|-----|-----|-----------|-----------|
| Ala | Thr 50 | Lys | Leu | Glu | Phe | Leu 55 | Arg | Glu | Gln | Met | Gln 60 | Arg | Asp | Leu | Leu |
| Leu 65 | Leu | Ala | Arg | Leu | Gln 70 | Gly | Pro | Leu | Trp | Ser 75 | His | Thr | Glu | Ala | Val 80 |
| Thr | Gly | His | Lys | Pro 85 | Arg | Arg | Ala | Arg | Gly 90 | Ser | Cys | Ala | Glu | Ala 95 | Pro |
| Gly | Pro | Leu | Ser 100 | Gly | Ser | Phe | Pro | Ser 105 | | | | | | | |

<210> 390

<211> 262

<212> PRT

<213> homo sapiens

<400> 390

| | | | | | | | | | | | | | | | |
|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Arg 1 | Cys | Pro | Arg | Arg 5 | Gly | Arg | Glu | Met | Asp 10 | Ser | Gly | Cys | Trp | Leu 15 | Phe |
| Gly | Gly | Glu | Phe 20 | Glu | Asp | Ser | Val | Phe 25 | Glu | Glu | Arg | Pro | Glu 30 | Arg | Arg |
| Ser | Gly | Pro 35 | Pro | Ala | Ser | Tyr | Cys 40 | Ala | Lys | Leu | Cys | Glu 45 | Pro | Gln | Trp |
| Phe | Tyr 50 | Glu | Glu | Thr | Glu | Ser 55 | Ser | Asp | Asp | Val | Glu 60 | Val | Leu | Thr | Leu |
| Lys 65 | Lys | Phe | Lys | Gly | Asp 70 | Leu | Ala | Tyr | Arg | Arg 75 | Gln | Glu | Tyr | Gln | Lys 80 |
| Ala | Leu | Gln | Glu | Tyr 85 | Ser | Ser | Ile | Ser | Glu 90 | Lys | Leu | Ser | Ser | Thr 95 | Asn |
| Phe | Ala | Met | Lys 100 | Arg | Asp | Val | Gln | Glu 105 | Gly | Gln | Ala | Arg | Cys 110 | Leu | Ala |
| His | Leu | Gly 115 | Arg | His | Met | Glu | Ala 120 | Leu | Glu | Ile | Ala 125 | Ala | Asn | Leu | Glu |
| Asn | Lys 130 | Ala | Thr | Asn | Thr | Asp 135 | His | Leu | Thr | Thr | Val 140 | Leu | Tyr | Leu | Gln |
| Leu 145 | Ala | Ile | Cys | Ser | Ser 150 | Leu | Gln | Asn | Leu | Glu 155 | Lys | Thr | Ile | Phe | Cys 160 |
| Leu | Gln | Lys | Leu | Ile 165 | Ser | Leu | His | Pro | Phe 170 | Asn | Pro | Trp | Asn | Trp 175 | Gly |
| Lys | Leu | Ala | Glu 180 | Ala | Tyr | Leu | Asn | Leu 185 | Gly | Pro | Ala | Leu | Ser 190 | Ala | Ala |
| Leu | Ala | Ser 195 | Ser | Gln | Lys | Gln | His 200 | Ser | Phe | Thr | Ser | Ser 205 | Asp | Lys | Thr |
| Ile | Lys 210 | Ser | Phe | Phe | Pro | His 215 | Ser | Gly | Lys | Asp | Cys 220 | Leu | Leu | Cys | Phe |

| | | | | | | | | | | | | | | | |
|------------|-----|-----|------------|------------|------------|-----|-----|-----|------------|------------|-----|-----|-----|------------|------------|
| Pro 225 | Glu | Thr | Leu | Pro | Glu 230 | Ser | Ser | Leu | Ile | Phe 235 | Cys | Gly | Arg | Asp | Thr 240 |
| Arg | Asn | Gly | Arg | Lys 245 | Ile | Gly | Lys | Phe | Cys 250 | Lys | Cys | Ala | Asn | Leu 255 | Val |
| Gly | Glu | Arg | Gly 260 | Thr | Gly | | | | | | | | | | |

<210> 391
 <211> 66
 <212> PRT
 <213> homo sapiens

<400> 391

| | | | | | | | | | | | | | | | |
|-----------|-----------|-----------|-----------|----------|-----|-----------|-----------|-----------|-----------|-----|-----------|-----------|-----------|-----------|-----|
| Lys 1 | Pro | Val | Pro | Leu 5 | Ser | Pro | Thr | Arg | Leu 10 | Ala | His | Leu | Gln | Asn 15 | Phe |
| Pro | Ile | Phe | Leu 20 | Pro | Phe | Leu | Val | Ser 25 | Leu | Pro | Gln | Lys | Ile 30 | Lys | Glu |
| Leu | Ser | Gly 35 | Lys | Val | Ser | Gly | Lys 40 | His | Lys | Arg | Gln | Ser 45 | Phe | Pro | Glu |
| Cys | Gly 50 | Lys | Lys | Asp | Leu | Ile 55 | Val | Leu | Ser | Leu | Glu 60 | Val | Lys | Leu | Cys |
| Cys 65 | Phe | | | | | | | | | | | | | | |

<210> 392
 <211> 78
 <212> PRT
 <213> homo sapiens

<400> 392

| | | | | | | | | | | | | | | | |
|-----------|-----------|-----------|-----------|----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----|
| Gln 1 | Ala | Gly | Gly | Arg 5 | Val | Pro | Trp | Leu | Asn 10 | Gly | Leu | Cys | Trp | Leu 15 | Leu |
| Tyr | Phe | Pro | Ser 20 | Leu | Gln | Gln | Ser | Pro 25 | Ala | Pro | Pro | Tyr | Ala 30 | Tyr | Pro |
| Gly | Glu | Pro 35 | Asp | Thr | Glu | Pro | Asp 40 | Leu | Pro | Gly | His | Pro 45 | Phe | Ser | Trp |
| Gln | Asn 50 | Trp | Leu | Met | Thr | Ile 55 | Phe | Gln | Arg | Tyr | Trp 60 | Asn | Thr | Pro | Ala |
| Val 65 | Leu | Ser | Asp | Thr | Leu 70 | Val | Val | Cys | Arg | Pro 75 | Gly | Leu | Leu | | |

<210> 393
 <211> 79
 <212> PRT
 <213> homo sapiens

<400> 393

| | | | | | | | | | | | | | | | |
|----------|-----|-----|-----|----------|-----|-----|-----|-----|-----------|-----|-----|-----|-----|-----------|-----|
| Thr 1 | Ser | Leu | Glu | Gly 5 | Ile | Asp | Leu | Gln | Pro 10 | Ser | His | Leu | Thr | Ile 15 | Tyr |
|----------|-----|-----|-----|----------|-----|-----|-----|-----|-----------|-----|-----|-----|-----|-----------|-----|

| | | | | | | | | | | | | | | | |
|-----------|-----------|-----------|-----------|-----|-----------|-----------|-----------|-----------|-----|-----------|-----------|-----------|-----------|-----|-----|
| Thr | Ala | Ala | Leu 20 | Lys | Glu | Lys | Thr | Pro 25 | Asp | Phe | Arg | Arg | Leu 30 | Ser | Pro |
| Arg | Val | Ser 35 | Glu | Thr | Ala | Asp | Ser 40 | Arg | Lys | Val | Ala | Arg 45 | Gly | Pro | Arg |
| Phe | Val 50 | Met | Arg | Asp | Asn | Pro 55 | Gly | Arg | Gly | Gly | Asp 60 | His | Arg | Gly | Leu |
| Gln 65 | Ala | Pro | Gly | Trp | Met 70 | Lys | Glu | Gly | Arg | Gly 75 | Trp | Gly | Val | Leu | |

<210> 394
 <211> 72
 <212> PRT
 <213> homo sapiens

<400> 394

| | | | | | | | | | | | | | | | |
|-----------|-----------|-----------|-----------|----------|-----------|-----------|-----------|-----------|-----------|-----|-----------|-----------|-----------|-----------|-----|
| Val 1 | Thr | Pro | Pro | Pro 5 | Pro | Ser | Gln | Ile | Ser 10 | Ser | Phe | Leu | Pro | Pro 15 | Ser |
| Thr | Ala | Pro | Phe 20 | Thr | Lys | Pro | Pro | Ile 25 | Pro | Asp | Pro | Pro | Ser 30 | Ser | Thr |
| Pro | Ala | Pro 35 | Gly | Asp | Pro | Tyr | Asp 40 | His | Pro | Arg | Ala | Arg 45 | Gly | Cys | Pro |
| Ala | Leu 50 | Gln | Ile | Gly | Ala | His 55 | Gly | Arg | Pro | Tyr | Gly 60 | Ser | Pro | Arg | Ser |
| Pro 65 | Arg | Arg | Glu | Glu | Arg 70 | Asp | Val | | | | | | | | |

<210> 395
 <211> 98
 <212> PRT
 <213> homo sapiens

<400> 395

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|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Pro 1 | Pro | Pro | Pro | Pro 5 | Pro | Lys | Phe | His | Pro 10 | Ser | Phe | Arg | Leu | Leu 15 | Gln |
| Pro | Pro | Leu | Gln 20 | Asn | Pro | Pro | Ser | Pro 25 | Thr | Leu | Leu | His | Pro 30 | Pro | Arg |
| Arg | Leu | Glu 35 | Thr | Pro | Met | Ile | Thr 40 | Pro | Ala | Pro | Gly | Val 45 | Val | Pro | His |
| Tyr | Lys 50 | Ser | Gly | Pro | Thr | Gly 55 | Asp | Leu | Thr | Gly | Val 60 | Arg | Gly | Leu | Arg |
| Asp 65 | Ala | Arg | Arg | Glu | Thr 70 | Ser | Glu | Val | Trp | Arg 75 | Leu | Phe | Leu | Gln | Gly 80 |
| Cys | Cys | Val | Asp | Cys 85 | Glu | Val | Gly | Gly | Leu 90 | Lys | Ile | Asn | Ser | Leu 95 | Glu |

Gly Gly

<210> 396
 <211> 80

<212> PRT
 <213> homo sapiens

<400> 396

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|-----------|-----------|-----------|-----------|----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Asn 1 | Trp | Arg | Gln | Thr 5 | Val | Trp | Gln | Arg | Val 10 | Arg | Glu | Gly | Ala | Cys 15 | Ala |
| Gln | Glu | Ser | Ser 20 | Arg | Pro | Ala | Ser | Gly 25 | Cys | Arg | Phe | Leu | Arg 30 | Cys | Ala |
| Ile | Gly | Ala 35 | Ser | Ala | Phe | Ser | Gly 40 | Asp | Arg | Gly | Ser | Ala 45 | Val | Ala | Thr |
| Asn | Thr 50 | Gln | Pro | His | Thr | His 55 | Asn | His | Thr | His | Lys 60 | Trp | Gly | Gln | Pro |
| His 65 | Pro | Val | Gln | Ala | Phe 70 | Thr | Asn | Val | Ile | Ser 75 | Val | Leu | Phe | Tyr | Phe 80 |

<210> 397
 <211> 309
 <212> PRT
 <213> homo sapiens

<400> 397

| | | | | | | | | | | | | | | | |
|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Tyr 1 | Asp | Asn | Ser | Ser 5 | Thr | Cys | Lys | Lys | Gly 10 | Lys | Val | Phe | Pro | Gly 15 | Lys |
| Ile | Ser | Val | Thr 20 | Val | Ser | Glu | Thr | Phe 25 | Asp | Pro | Glu | Glu | Lys 30 | His | Ser |
| Met | Ala | Tyr 35 | Gln | Asp | Leu | His | Ser 40 | Glu | Ile | Thr | Ser | Leu 45 | Phe | Lys | Asp |
| Val | Phe 50 | Gly | Thr | Ser | Val | Tyr 55 | Gly | Gln | Thr | Val | Ile 60 | Leu | Thr | Val | Ser |
| Thr 65 | Ser | Leu | Ser | Pro | Arg 70 | Ser | Glu | Met | Arg | Ala 75 | Asp | Asp | Lys | Phe | Val 80 |
| Asn | Val | Thr | Ile | Val 85 | Thr | Ile | Leu | Ala | Glu 90 | Thr | Thr | Ser | Asp | Asn 95 | Glu |
| Lys | Thr | Val | Thr 100 | Glu | Lys | Ile | Asn 105 | Lys | Ala | Ile | Arg | Ser | Ser 110 | Ser | Ser |
| Asn | Phe | Leu 115 | Asn | Tyr | Asp | Leu | Thr 120 | Leu | Arg | Cys | Asp | Tyr 125 | Tyr | Gly | Cys |
| Asn | Gln 130 | Thr | Ala | Asp | Asp | Cys 135 | Leu | Asn | Gly | Leu | Ala 140 | Cys | Asp | Cys | Lys |
| Ser 145 | Asp | Leu | Gln | Arg | Pro 150 | Asn | Pro | Gln | Ser | Pro 155 | Phe | Cys | Val | Ala | Ser 160 |
| Ser | Leu | Lys | Cys | Pro 165 | Asp | Ala | Cys | Asn | Ala 170 | Gln | His | Lys | Gln | Cys 175 | Leu |
| Ile | Lys | Lys | Ser 180 | Gly | Gly | Ala | Pro | Glu 185 | Cys | Ala | Cys | Val | Pro 190 | Gly | Tyr |

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|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|
| | | | 20 | | | | | 25 | | | | | 30 | | | |
| Thr | Ser | Thr | Phe | Asp | Phe | Ser | Gln | Pro | Gln | Pro | Arg | Lys | Asn | Gly | Ser | |
| | | 35 | | | | | 40 | | | | | 45 | | | | |
| Trp | Asp | Lys | Gln | Leu | Val | Phe | Val | Ser | Lys | Thr | Gln | Ile | Gly | His | Ile | |
| | 50 | | | | | 55 | | | | | 60 | | | | | |
| Asn | Ala | Thr | Ala | Phe | Arg | Ser | Phe | Asp | Phe | Asp | | | | | | |
| 65 | | | | | 70 | | | | | 75 | | | | | | |

<210> 400
 <211> 70
 <212> PRT
 <213> homo sapiens

<400> 400

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|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|
| Arg | Lys | Lys | Ala | Val | Cys | Phe | Met | Asn | Asp | Leu | Ile | Cys | Phe | Leu | Asp | |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | | |
| Asn | Thr | Phe | Lys | Asn | Asn | Val | Leu | Ser | Gln | Ala | Trp | Trp | Cys | Val | His | |
| | | | 20 | | | | | 25 | | | | | 30 | | | |
| Leu | Val | Pro | Thr | Ile | Trp | Glu | Ala | Glu | Ala | Gly | Gly | Ser | Leu | Glu | Pro | |
| | | 35 | | | | | 40 | | | | | 45 | | | | |
| Arg | Ser | Leu | Lys | Leu | Gln | Cys | Pro | Val | Val | Ala | Pro | Val | Asn | Asn | Cys | |
| | 50 | | | | | 55 | | | | | 60 | | | | | |
| Thr | Pro | Ala | Trp | Ala | Thr | | | | | | | | | | | |
| 65 | | | | | 70 | | | | | | | | | | | |

<210> 401
 <211> 69
 <212> PRT
 <213> homo sapiens

<400> 401

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|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|
| Leu | Val | Pro | Gln | Gly | Ser | Leu | Leu | Gln | Thr | His | Pro | Phe | Val | Phe | Phe | |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | | |
| Ser | Phe | Leu | Glu | Met | Arg | Ser | Arg | Tyr | Val | Ala | Gln | Ala | Gly | Val | Gln | |
| | | | 20 | | | | | 25 | | | | | 30 | | | |
| Leu | Phe | Thr | Gly | Ala | Thr | Thr | Gly | His | Cys | Ser | Phe | Lys | Leu | Leu | Gly | |
| | | 35 | | | | | 40 | | | | | 45 | | | | |
| Ser | Ser | Asp | Pro | Pro | Ala | Ser | Ala | Ser | Gln | Ile | Val | Gly | Thr | Arg | Cys | |
| | 50 | | | | | 55 | | | | | 60 | | | | | |
| Thr | His | His | His | Ala | | | | | | | | | | | | |
| 65 | | | | | | | | | | | | | | | | |

<210> 402
 <211> 80
 <212> PRT
 <213> homo sapiens

<400> 402

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|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|
| Pro | Pro | Leu | Trp | Val | Ala | Thr | Val | Arg | Asn | Gly | Cys | Cys | His | Val | Phe | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|

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|-----------|-----------|-----------|-----------|-----|-----------|-----------|-----------|-----------|-----|-----------|-----------|-----------|-----------|-----|-----------|--|
| 1 | | | | 5 | | | | | 10 | | | | | 15 | | |
| Trp | Thr | Leu | Pro 20 | Ala | Asn | Arg | Ser | Leu 25 | Pro | Gly | Phe | Gly | Asn 30 | Thr | Ser | |
| Ile | Thr | Ser 35 | Leu | Leu | Leu | Phe | Cys 40 | Arg | Asp | Lys | Thr | Phe 45 | Glu | Val | Ala | |
| Arg | Pro 50 | Arg | Thr | Ser | Lys | Asp 55 | Ser | Cys | Tyr | Ser | Ala 60 | Thr | Val | Tyr | Thr | |
| Ala 65 | His | Leu | Ser | Tyr | Ser 70 | His | Val | Leu | Ser | Ser 75 | Leu | Val | Arg | Leu | Phe 80 | |

<210> 403

<211> 81

<212> PRT

<213> homo sapiens

<400> 403

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|-----------|-----------|-----------|-----------|----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|--|
| Leu 1 | Thr | Asn | Met | Ser 5 | Asp | His | Leu | Phe | Gly 10 | Trp | Leu | Leu | Leu | Glu 15 | Met | |
| Ala | Val | Val | Met 20 | Phe | Ser | Gly | Leu | Cys 25 | Gln | Pro | Thr | Asp | Pro 30 | Cys | Gln | |
| Val | Leu | Glu 35 | Ile | Leu | Leu | Leu | Pro 40 | Arg | Cys | Tyr | Phe | Ser 45 | Ala | Gly | Ile | |
| Lys | Leu 50 | Leu | Arg | Trp | Pro | Asp 55 | Pro | Glu | His | Pro | Arg 60 | Ile | Pro | Val | Thr | |
| Val 65 | Leu | Gln | Tyr | Thr | Leu 70 | Leu | Ile | Tyr | Pro | Ile 75 | Leu | Met | Cys | Phe | Leu 80 | |

Leu

<210> 404

<211> 75

<212> PRT

<213> homo sapiens

<400> 404

| | | | | | | | | | | | | | | | | |
|-----------|-----------|-----------|-----------|----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----|--|
| Val 1 | Ser | His | Tyr | Pro 5 | His | Ser | Val | Ser | Lys 10 | Pro | Pro | Lys | His | Gln 15 | Thr | |
| Lys | Gln | Met | Val 20 | Val | Ala | Leu | Thr | His 25 | Ser | Arg | Leu | Thr | Ser 30 | Glu | Phe | |
| Lys | Trp | Glu 35 | Asn | Thr | Pro | Tyr | Thr 40 | Thr | Val | Ile | Ile | Pro 45 | Leu | Trp | Thr | |
| Leu | Asn 50 | Ile | Thr | Tyr | Phe | Leu 55 | Lys | Ile | Ile | Leu | Leu 60 | Lys | Lys | Lys | Ala | |
| His 65 | Glu | Asn | Arg | Ile | Asn 70 | Glu | Gln | Cys | Ile | Leu 75 | | | | | | |

<210> 405

<211> 328

<212> PRT

<213> homo sapiens

<400> 405

| | | | | | | | | | | | | | | | |
|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Arg 1 | Tyr | Leu | Asn | Met 5 | Gly | Asn | Leu | Leu | Lys 10 | Val | Leu | Thr | Cys | Thr 15 | Asp |
| Leu | Glu | Gln | Gly 20 | Pro | Asn | Phe | Phe | Leu 25 | Asp | Phe | Glu | Asn | Ala 30 | Gln | Pro |
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| Ser | Gly | Arg 35 | Arg | Pro | Asn | Met | Asp 40 | Ser | Ala | Gly | Gln | Asp 45 | Ile | Asn | Leu |
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| Lys | Lys | Leu | Ser | Asp | Tyr | Val | Gly | Lys | Asn | Glu | Lys | Thr | Lys | Ile | Ile |
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| Ser | Gly | Ile 35 | Pro | Arg | Ser | Leu | Ala 40 | Arg | Gly | Glu | Arg | Gly 45 | Lys | Arg | His |
| Ser | Leu 50 | Pro | Glu | Val | Asp | Val 55 | Ala | Lys | Ser | Asn | Ser 60 | Glu | Ala | Glu | Leu |
| Lys 65 | Ser | Arg | Gln | Leu | Lys 70 | Leu | Arg | Thr | Arg | Val 75 | Gly | Glu | Ala | Gly | Val 80 |
| His | Arg | Gly | Pro | Ala 85 | Ile | Gln | Ala | Arg | Thr 90 | Glu | Leu | Arg | Pro | Gly 95 | Lys |
| Pro | Pro | Thr | Gln 100 | Ser | Glu | Arg | Thr | Ala 105 | Asp | Ser | Glu | Arg | Thr 110 | Asp | Gly |
| Arg | Arg | Phe 115 | Ala | Asp | Pro | Leu | Pro 120 | Gly | Ser | Asp | Cys | Cys 125 | Arg | Gly | Asn |
| Cys | Gln 130 | Asn | Thr | Asp | Gln | Val 135 | Ala | Glu | Gly | Glu | Gly 140 | Gly | Pro | Pro | Asn |
| Arg 145 | Leu | Val | Trp | Gly | Pro 150 | Arg | Phe | Pro | Leu | Arg 155 | Glu | Ile | Arg | Gly | Leu 160 |
| Arg | Trp | Glu | Leu | Leu 165 | Asp | Gly | Glu | Arg | Glu 170 | Ile | Arg | Arg | Glu | Pro 175 | Gln |
| Ser | Arg | Ser | Ser 180 | Ala | Ala | | | | | | | | | | |

<210> 417

<211> 467
 <212> PRT
 <213> homo sapiens

<400> 417

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| His 1 | Thr | Leu | Ser | Arg 5 | Trp | Thr | Lys | His | Ser 10 | Ile | Pro | Arg | Trp | Asn 15 | Asp |
| Ala | Arg | Thr | Asp 20 | Asp | Thr | Trp | His | Ser 25 | Glu | Leu | Asp | Met | Arg 30 | Lys | Ile |
| Gly | Gln | Ala 35 | Arg | Asn | Thr | Leu | Met 40 | Asp | Met | Arg | Leu | Ser 45 | Gln | Val | Ser |
| Asp | Ser 50 | Val | Ser | Gly | Gln | Thr 55 | Val | Val | Asp | Pro | Lys 60 | Gly | Tyr | Leu | Thr |
| Asp 65 | Leu | Asn | Ser | Met | Ile 70 | Pro | Thr | His | Gly | Gly 75 | Asp | Ile | Asn | Asp | Ile 80 |
| Lys | Lys | Ala | Arg | Leu 85 | Leu | Leu | Lys | Ser | Val 90 | Arg | Glu | Thr | Asn | Pro 95 | His |
| His | Pro | Pro | Ala 100 | Trp | Ile | Ala | Ser | Ala 105 | Arg | Leu | Glu | Glu | Val 110 | Thr | Gly |
| Lys | Leu | Gln 115 | Val | Ala | Arg | Asn | Leu 120 | Ile | Met | Lys | Gly | Thr 125 | Glu | Met | Cys |
| Pro | Lys 130 | Ser | Glu | Asp | Val | Trp 135 | Leu | Glu | Ala | Ala | Arg 140 | Leu | Gln | Pro | Gly |
| Asp 145 | Thr | Ala | Lys | Ala | Val 150 | Val | Ala | Gln | Ala | Val 155 | Arg | His | Leu | Pro | Gln 160 |
| Ser | Val | Arg | Ile | Tyr 165 | Ile | Arg | Ala | Ala | Glu 170 | Leu | Glu | Thr | Asp | Ile 175 | Arg |
| Ala | Lys | Lys | Arg 180 | Val | Leu | Arg | Lys | Ala 185 | Leu | Glu | His | Val | Pro 190 | Asn | Ser |
| Val | Arg | Leu 195 | Trp | Lys | Ala | Ala | Val 200 | Glu | Leu | Glu | Glu | Pro 205 | Glu | Asp | Ala |
| Arg | Ile 210 | Met | Leu | Ser | Arg | Ala 215 | Val | Glu | Cys | Cys | Pro 220 | Thr | Ser | Val | Glu |
| Leu 225 | Trp | Leu | Ala | Leu | Ala 230 | Arg | Leu | Glu | Thr | Tyr 235 | Glu | Asn | Ala | Arg | Lys 240 |
| Val | Leu | Asn | Lys | Ala 245 | Arg | Glu | Asn | Ile | Pro 250 | Thr | Asp | Arg | His | Ile 255 | Trp |
| Ile | Thr | Ala | Ala 260 | Lys | Leu | Glu | Glu | Ala 265 | Asn | Gly | Asn | Thr | Gln 270 | Met | Val |
| Glu | Lys | Ile 275 | Ile | Asp | Arg | Ala | Ile 280 | Thr | Ser | Leu | Arg | Ala 285 | Asn | Gly | Val |
| Glu | Ile 290 | Asn | Arg | Glu | Gln | Trp 295 | Ile | Gln | Asp | Ala | Glu 300 | Glu | Cys | Asp | Arg |

| | | | | | | | | | | | | | | | |
|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Ala 305 | Gly | Ser | Val | Ala | Thr 310 | Cys | Gln | Ala | Val | Met 315 | Arg | Ala | Val | Ile | Gly 320 |
| Ile | Gly | Ile | Glu | Glu 325 | Glu | Asp | Arg | Lys | His 330 | Thr | Trp | Met | Glu | Asp 335 | Ala |
| Asp | Ser | Cys | Val 340 | Ala | His | Asn | Ala | Leu 345 | Glu | Cys | Ala | Arg | Ala 350 | Ile | Tyr |
| Ala | Tyr | Ala 355 | Leu | Gln | Val | Phe | Pro 360 | Ser | Lys | Lys | Ser | Val 365 | Trp | Leu | Arg |
| Ala | Ala 370 | Tyr | Phe | Glu | Lys | Asn 375 | His | Gly | Thr | Arg | Glu 380 | Ser | Leu | Glu | Ala |
| Leu 385 | Leu | Gln | Arg | Ala | Val 390 | Ala | His | Cys | Pro | Lys 395 | Ala | Glu | Val | Leu | Trp 400 |
| Leu | Met | Gly | Ala | Lys 405 | Ser | Lys | Trp | Leu | Ala 410 | Gly | Asp | Val | Pro | Ala 415 | Ala |
| Arg | Ser | Ile | Leu 420 | Ala | Leu | Ala | Phe | Gln 425 | Ala | Asn | Pro | Asn | Ser 430 | Glu | Glu |
| Ile | Trp | Leu 435 | Ala | Ala | Val | Lys | Leu 440 | Glu | Ser | Glu | Asn | Asp 445 | Glu | Tyr | Glu |
| Arg | Ala 450 | Arg | Arg | Leu | Leu | Ala 455 | Lys | Ala | Arg | Thr | Val 460 | Pro | Pro | Pro | Pro |
| Gly 465 | Cys | Ser | | | | | | | | | | | | | |

<210> 418

<211> 352

<212> PRT

<213> homo sapiens

<400> 418

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| Thr 1 | Pro | Gly | Arg | Trp 5 | Gly | His | Cys | Pro | Arg 10 | Leu | Gly | Gln | Gln | Pro 15 | Pro |
| Gly | Pro | Leu | Val 20 | Leu | Ile | Ile | Leu | Gly 25 | Leu | Gln | Leu | His | Gly 30 | Cys | Gln |
| Pro | Asp | Leu 35 | Leu | Thr | Val | Gly | Val 40 | Gly | Leu | Glu | Gly | Gln 45 | Gly | Gln | Asp |
| Ala | Pro 50 | Cys | Cys | Arg | His | Ile 55 | Pro | Cys | Gln | Pro | Leu 60 | Gly | Leu | Gly | Ala |
| His 65 | Glu | Pro | Gln | His | Leu 70 | Cys | Phe | Gly | Ala | Val 75 | Gly | His | Ser | Pro | Leu 80 |
| Gln | Glu | Cys | Phe | Gln 85 | Gly | Leu | Pro | Ser | Ala 90 | Met | Val | Leu | Leu | Glu 95 | Val |
| Arg | Gly | Ala | Gln 100 | Pro | His | Thr | Leu | Leu 105 | Ala | Gly | Glu | His | Leu 110 | Gln | Gly |
| Val | Gly | Val 115 | Asp | Gly | Ser | Cys | Thr 120 | Leu | Gln | Gly | Ile | Val 125 | Gly | Tyr | Thr |

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Thr | Val | Ser | Ile | Leu | His | Pro | Gly | Met | Leu | Pro | Ile | Phe | Leu | Leu | Asn |
| | 130 | | | | | 135 | | | | | 140 | | | | |
| Pro | Asn | Pro | Asn | His | Gly | Thr | His | Asp | Gly | Leu | Ala | Gly | Gly | His | Thr |
| 145 | | | | | 150 | | | | | 155 | | | | | 160 |
| Pro | Ser | Pro | Val | Thr | Phe | Leu | Gly | Ile | Leu | Asp | Pro | Leu | Leu | Thr | Val |
| | | | | 165 | | | | | 170 | | | | | 175 | |
| Asp | Leu | His | Thr | Val | Gly | Pro | Gln | Arg | Gly | Asp | Gly | Ser | Val | Asp | Asp |
| | | | 180 | | | | | 185 | | | | | 190 | | |
| Leu | Leu | His | His | Leu | Arg | Val | Pro | Ile | Gly | Phe | Leu | Gln | Leu | Ser | Ser |
| | | 195 | | | | | 200 | | | | | 205 | | | |
| Arg | Asp | Pro | Asp | Met | Ser | Val | Cys | Arg | Asn | Val | Leu | Pro | Arg | Leu | Val |
| | 210 | | | | | 215 | | | | | 220 | | | | |
| Gln | Asp | Leu | Ala | Gly | Ile | Phe | Ile | Gly | Leu | Gln | Pro | Cys | Gln | Ser | Lys |
| 225 | | | | | 230 | | | | | 235 | | | | | 240 |
| Pro | Glu | Leu | His | Ala | Gly | Gly | Ala | Ala | Leu | His | Ser | Ser | Ala | Gln | His |
| | | | | 245 | | | | | 250 | | | | | 255 | |
| Asp | Ser | Ser | Ile | Phe | Arg | Phe | Phe | Gln | Leu | Asn | Gly | Cys | Phe | Pro | Gln |
| | | | 260 | | | | | 265 | | | | | 270 | | |
| Ala | Asn | Arg | Val | Trp | Asn | Met | Leu | Glu | Gly | Phe | Pro | Lys | Asn | Pro | Leu |
| | | 275 | | | | | 280 | | | | | 285 | | | |
| Leu | Cys | Thr | Asn | Val | Arg | Phe | Gln | Leu | Cys | Gly | Ser | Asp | Val | Asn | Pro |
| | 290 | | | | | 295 | | | | | 300 | | | | |
| Asp | Arg | Leu | Trp | Glu | Met | Thr | Asp | Ser | Leu | Gly | Tyr | His | Gly | Leu | Gly |
| 305 | | | | | 310 | | | | | 315 | | | | | 320 |
| Cys | Val | Pro | Arg | Leu | Gln | Pro | Gly | Cys | Phe | Gln | Pro | Asp | Ile | Phe | Thr |
| | | | | 325 | | | | | 330 | | | | | 335 | |
| Leu | Gly | Ala | His | Leu | Arg | Pro | Leu | His | Asp | Lys | Val | Pro | Ser | Tyr | Leu |
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<210> 419

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<212> PRT

<213> homo sapiens

<400> 419

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| Pro | Pro | Gly | Ala | Pro | Phe | Phe | Leu | Phe | Phe | Phe | Phe | Leu | Thr | Arg | Asp |
| 1 | | | | 5 | | | | 10 | | | | | | 15 | |
| Ile | Lys | Thr | Phe | Asn | Glu | Gly | Gly | His | Ser | Ser | Glu | Pro | Phe | His | Met |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Arg | Pro | Asn | Pro | Ala | Pro | Arg | Arg | Pro | Ala | Met | Ala | Thr | Ala | Gln | Ser |
| | | 35 | | | | | 40 | | | | | 45 | | | |
| Glu | Gly | Val | Leu | Asp | Ala | Ala | Gly | His | Gln | Pro | Lys | Asp | Val | Pro | Asp |
| | 50 | | | | | 55 | | | | | 60 | | | | |
| Leu | Leu | Leu | Pro | Val | Gly | Asp | Val | Leu | Gly | His | Gly | Ala | Pro | Gln | Leu |

| 65 | | | | | 70 | | | | | 75 | | | | | 80 | |
|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|--|
| Pro | Met | Pro | Arg | Leu 85 | Cys | Thr | Leu | Thr | Ala 90 | Leu | Pro | His | Leu | Leu 95 | Leu | |
| Leu | Leu | Leu | Ser 100 | Ala | Met | Leu | Gln | Leu 105 | Lys | Leu | Val | Glu | Glu 110 | Gly | Pro | |
| Gly | Ile | Pro 115 | Gln | Val | Arg | Val | Asn 120 | Leu | His | Ser | Ala | Val 125 | Glu | Pro | Leu | |
| Pro | Gly 130 | Leu | Gly | Asp | Leu | Pro 135 | Leu | Thr | Pro | Lys | Gln 140 | Leu | Gly | His | Gly | |
| Gln 145 | Glu | His | Met | Gly | Val 150 | Met | Leu | Thr | Leu | Leu 155 | Gln | Gly | Ile | His | Ala 160 | |
| Leu | Gly | Pro | Pro | Leu 165 | Gly | Pro | Cys | Leu | Glu 170 | Glu | Asp | Gly | Leu | Arg 175 | Pro | |
| Gln | Asp | Thr | Gly 180 | Val | Gly | Ala | Leu | Leu 185 | Gln | Arg | Leu | Gly | His 190 | Glu | Cys | |
| Ile | Cys | Asp 195 | Val | Leu | Gln | Pro | Arg 200 | Thr | Val | Leu | Gln | Pro 205 | His | Gly | Leu | |
| Gln | Pro 210 | Gln | Pro | Arg | Val | Leu 215 | Trp | Val | Leu | Gln | Thr 220 | Arg | Leu | Phe | Gln | |
| Asn 225 | Gly | Pro | Cys | Ser | Ser 230 | Lys | Leu | Pro | Asn | Leu 235 | Leu | Leu | Gln | Pro | Arg 240 | |
| Glu | Gln | Lys | Pro | Gln 245 | Gly | Cys | Gly | Val | Gly 250 | Thr | Leu | Leu | Gln | Pro 255 | Leu | |
| Val | Ile | Gly | Phe 260 | Pro | Arg | Leu | Leu | His 265 | His | Leu | Leu | Leu | Leu 270 | Leu | Asp | |
| Leu | Pro | Leu 275 | His | His | Pro | Gln | Leu 280 | Gly | Glu | Val | Leu | Ile 285 | Val | Pro | Gln | |
| Gly | Leu 290 | Leu | Ala | Gln | Ile | Leu 295 | Gly | Cys | Pro | Asp | Val 300 | Val | Leu | His | Pro | |
| Leu 305 | Gln | Leu | His | Arg | Leu 310 | His | Glu | His | Pro | Gly 315 | Gly | Gly | Gly | Thr | Val 320 | |
| Arg | Ala | Leu | Ala | Ser 325 | Ser | Leu | Arg | Ala | Arg 330 | Ser | Tyr | Ser | Ser | Phe 335 | Ser | |
| Asp | Ser | Ser | Phe 340 | Thr | Ala | Ala | Ser | Gln 345 | Ile | Ser | Ser | Leu | Leu 350 | Gly | Leu | |
| Ala | Trp | Lys 355 | Ala | Arg | Ala | Arg | Met 360 | Leu | Leu | Ala | Ala | Gly 365 | Thr | Ser | Pro | |
| Ala | Ser 370 | His | Leu | Asp | Leu | Ala 375 | Pro | Met | Ser | His | Ser 380 | Thr | Ser | Ala | Leu | |
| Gly 385 | Gln | Trp | Ala | Thr | Ala 390 | Leu | Cys | Arg | Ser | Ala 395 | Ser | Arg | Asp | Ser | Arg 400 | |
| Val | Pro | Trp | Phe | Phe | Ser | Lys | Tyr | Ala | Ala | Arg | Ser | His | Thr | Leu | Phe | |

| | 405 | | | | | | | 410 | | | | | 415 | | | |
|-------|--------------|-----------|------------|------------|-----------|-----------|-----------|------------|------------|-----------|-----------|-----------|------------|------------|-----------|-----------|
| | Leu | Leu | Gly | Asn 420 | Thr | Cys | Arg | Ala | | | | | | | | |
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| <213> | homo sapiens | | | | | | | | | | | | | | | |
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| | Gly 1 | Arg | Thr | Leu | Pro 5 | Arg | Gly | Gly | Gly | Thr 10 | Val | Trp | Val | Gln | Gly 15 | His |
| | Gly | Leu | Glu | Gly 20 | Trp | Trp | Ala | Ala | Leu 25 | Ser | Gly | Ser | Gly | Phe 30 | Pro | Ala |
| | Val | Gly | Phe 35 | Leu | Phe | Trp | Leu | Leu 40 | Arg | Leu | Val | Tyr | Phe 45 | Leu | Ser | Leu |
| | Leu | Pro 50 | Val | Thr | Pro | Gly | Ala 55 | Pro | Glu | Tyr | Arg | Leu 60 | Phe | Ser | Pro | Trp |
| | Ala 65 | Val | Ser | Leu | Ser | Cys 70 | Phe | Leu | Thr | Leu | Leu 75 | Pro | Gly | Leu | Leu | Cys 80 |
| | Val | His | Leu | Arg | Leu 85 | Ala | Trp | Ser | Lys | Gln 90 | Val | Arg | Pro | Leu | Leu 95 | Leu |
| | Tyr | Ser | Leu | Val 100 | Leu | Phe | Trp | His | Leu 105 | Val | Lys | Leu | Ala | | | |
| <210> | 421 | | | | | | | | | | | | | | | |
| <211> | 177 | | | | | | | | | | | | | | | |
| <212> | PRT | | | | | | | | | | | | | | | |
| <213> | homo sapiens | | | | | | | | | | | | | | | |
| <400> | 421 | | | | | | | | | | | | | | | |
| | Val 1 | Ser | Val | Pro | Ser 5 | Ser | Ser | Ala | Ala | Gly 10 | Thr | Leu | Phe | Gln | Gly 15 | Leu |
| | Cys | Gly | Ala | Pro 20 | Asp | Ala | Pro | His | Pro 25 | Leu | Ser | Lys | Ile | Pro 30 | Gly | Gly |
| | Arg | Gly | Gly 35 | Gly | Arg | Asp | Pro | Ser 40 | Leu | Ser | Ala | Leu | Ile 45 | Tyr | Lys | Asp |
| | Glu | Lys 50 | Leu | Thr | Val | Thr | Gln 55 | Asp | Leu | Pro | Val | Asn 60 | Asp | Gly | Lys | Pro |
| | His 65 | Ile | Val | His | Phe | Gln 70 | Tyr | Glu | Val | Thr | Glu 75 | Val | Lys | Val | Ser | Ser 80 |
| | Trp | Asp | Ala | Val | Leu 85 | Ser | Ser | Gln | Ser | Leu 90 | Phe | Val | Glu | Ile | Pro 95 | Asp |
| | Gly | Leu | Leu | Ala 100 | Asp | Gly | Ser | Lys | Glu 105 | Gly | Leu | Leu | Ala | Leu 110 | Leu | Glu |
| | Phe | Ala | Glu 115 | Glu | Lys | Met | Lys | Val 120 | Asn | Tyr | Val | Phe | Ile 125 | Cys | Phe | Arg |

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Lys | Gly | Arg | Glu | Asp | Arg | Ala | Pro | Leu | Leu | Lys | Thr | Phe | Ser | Phe | Leu |
| | 130 | | | | | 135 | | | | | 140 | | | | |
| Gly | Phe | Glu | Ile | Val | Arg | Pro | Gly | His | Pro | Cys | Val | Pro | Ser | Arg | Pro |
| 145 | | | | | 150 | | | | | 155 | | | | | 160 |
| Asp | Val | Met | Phe | Met | Val | Tyr | Pro | Leu | Asp | Gln | Asn | Leu | Ser | Asp | Glu |
| | | | | 165 | | | | | 170 | | | | | 175 | |

Asp

<210> 422
 <211> 114
 <212> PRT
 <213> homo sapiens

<400> 422

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|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Ser | Arg | Pro | Tyr | Ile | Leu | Glu | Leu | Arg | Glu | Lys | Asp | Pro | Cys | Arg |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Pro | Leu | Ala | His | Arg | Gly | Ser | Ser | Thr | Val | Gly | Glu | Gly | His | Gln | Glu |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| His | His | Arg | Gly | Pro | Gly | Thr | Met | Cys | Leu | Gln | His | Trp | Ser | Trp | Gly |
| | | 35 | | | | | 40 | | | | | 45 | | | |
| His | Leu | Leu | Asn | Gly | Lys | Ile | Leu | Leu | Ser | Trp | Val | Phe | Ile | Ile | Leu |
| | 50 | | | | | 55 | | | | | 60 | | | | |
| Gly | Gly | Ser | Ala | Gln | Gly | Gly | Arg | Arg | Arg | Arg | Gly | Glu | Trp | Val | Gly |
| 65 | | | | | 70 | | | | | 75 | | | | | 80 |
| Gly | Arg | Val | Gly | Gly | Cys | Gly | Val | Ala | Arg | Ala | Gly | Arg | Ser | Leu | Trp |
| | | | | 85 | | | | | 90 | | | | | 95 | |
| Ala | Lys | Ser | Leu | Ser | Gly | Arg | Gly | Arg | Val | Pro | Ser | Ser | Cys | Leu | Ser |
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Glu Arg

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 <400> 423
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<210> 424
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<210> 425
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<210> 426
 <211> 50
 <212> PRT
 <213> homo sapiens

<400> 426

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| Pro | Phe | Cys | Ser | Ser | Leu | Ala | Lys | Leu | Gln | Gly | Ile | Trp | Gly | Met | Trp |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |

| | | | | | | | | | | | | | | | |
|-----|-----------|-----------|-----------|-----|-----|-----|-----------|-----------|-----|-----|-----|-----------|-----------|-----|-----|
| Asp | Leu | Gln | Phe 20 | Pro | Ala | Pro | Ala | Ser 25 | Ala | Leu | Ser | Gln | Val 30 | Leu | Thr |
| Pro | Ala | Pro 35 | Ala | Ser | Ala | Pro | Ala 40 | Pro | Gly | Arg | Ala | Pro 45 | Ala | Pro | Ala |
| Ala | Ala 50 | | | | | | | | | | | | | | |

<210> 427
 <211> 114
 <212> PRT
 <213> homo sapiens

<400> 427

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| Glu 1 | Asp | Lys | Met | Arg 5 | Pro | Gly | Leu | Ser | Phe 10 | Leu | Leu | Ala | Leu | Leu 15 | Phe |
| Phe | Leu | Gly | Gln 20 | Ala | Ala | Gly | Asp | Leu 25 | Gly | Asp | Val | Gly | Pro 30 | Pro | Ile |
| Pro | Ser | Pro 35 | Gly | Phe | Ser | Ser | Phe 40 | Pro | Gly | Val | Asp | Ser 45 | Ser | Ser | Ser |
| Phe | Ser 50 | Ser | Ser | Ser | Arg | Ser 55 | Gly | Ser | Ser | Ser | Ser 60 | Arg | Ser | Leu | Gly |
| Ser 65 | Gly | Gly | Ser | Val | Ser 70 | Gln | Leu | Phe | Ser | Asn 75 | Phe | Thr | Gly | Ser | Val 80 |
| Asp | Asp | Arg | Gly | Thr 85 | Cys | Gln | Cys | Ser | Val 90 | Ser | Leu | Pro | Asp | Asn 95 | Asn |
| Phe | Pro | Val | Asp 100 | Arg | Val | Glu | Arg | Trp 105 | Asn | Ser | Gln | Leu | Ile 110 | Val | Ile |
| Ser | Gln | | | | | | | | | | | | | | |

<210> 428
 <211> 113
 <212> PRT
 <213> homo sapiens

<400> 428

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| Glu 1 | Ile | Thr | Met | Ser 5 | Cys | Glu | Phe | Gln | Arg 10 | Ser | Thr | Leu | Ser | Thr 15 | Gly |
| Lys | Leu | Leu | Ser 20 | Gly | Arg | Glu | Thr | Glu 25 | His | Trp | Gln | Val | Pro 30 | Arg | Ser |
| Ser | Thr | Glu 35 | Pro | Val | Lys | Leu | Glu 40 | Asn | Asn | Trp | Asp | Thr 45 | Glu | Pro | Pro |
| Leu | Pro 50 | Lys | Leu | Arg | Leu | Glu 55 | Leu | Glu | Pro | Asp | Leu 60 | Glu | Leu | Glu | Leu |
| Lys 65 | Leu | Glu | Leu | Glu | Ser 70 | Thr | Pro | Gly | Lys | Glu 75 | Leu | Lys | Pro | Gly | Leu 80 |
| Gly | Ile | Gly | Gly | Pro | Thr | Ser | Pro | Lys | Ser | Pro | Ala | Ala | Trp | Pro | Arg |

| | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|
| | | | | 85 | | | | | 90 | | | | | 95 | | |
| Lys | Asn | Arg | Arg | Ala | Arg | Arg | Asn | Glu | Arg | Pro | Gly | Leu | Ile | Leu | Ser | |
| | | | 100 | | | | | 105 | | | | | 110 | | | |

Ser

<210> 429
 <211> 50
 <212> PRT
 <213> homo sapiens

<400> 429

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| Ala | Ala | Ala | Gly | Ala | Gly | Ala | Arg | Pro | Gly | Ala | Gly | Ala | Glu | Ala | Gly | |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | | |
| Ala | Gly | Val | Asn | Thr | Trp | Glu | Arg | Ala | Glu | Ala | Gly | Ala | Gly | Asn | Trp | |
| | | | 20 | | | | | 25 | | | | | 30 | | | |
| Arg | Ser | His | Ile | Pro | Gln | Ile | Pro | Cys | Ser | Leu | Ala | Lys | Glu | Glu | Gln | |
| | | 35 | | | | | 40 | | | | | 45 | | | | |

Lys Gly
 50

<210> 430
 <211> 224
 <212> PRT
 <213> homo sapiens

<400> 430

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|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|
| Gln | Thr | Gln | Lys | Val | Val | Thr | Ser | Pro | Pro | Arg | Ile | Thr | Leu | His | Trp | |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | | |
| Leu | Leu | Pro | Cys | Ala | Ala | His | Pro | Pro | Asp | Leu | His | Lys | Lys | Gly | Gln | |
| | | | 20 | | | | | 25 | | | | | 30 | | | |
| Glu | Asn | Ser | Gly | Cys | Ala | Pro | Ala | Thr | Ala | His | Ser | Ala | Pro | Pro | Gly | |
| | | 35 | | | | | 40 | | | | | 45 | | | | |
| Arg | Ser | Pro | Pro | Glu | Leu | Arg | Ala | Gly | Leu | Gln | Arg | Leu | Ala | Arg | Ala | |
| | 50 | | | | | 55 | | | | | 60 | | | | | |
| Val | Leu | Pro | Val | Ser | Arg | Phe | Ser | Ala | Pro | Gln | Pro | Pro | Ala | Ala | Ser | |
| 65 | | | | | 70 | | | | | 75 | | | | | 80 | |
| Phe | Ser | Gly | Pro | Arg | Val | Ala | Pro | Ser | Glu | Glu | Ser | Gly | Pro | Gly | Thr | |
| | | | | 85 | | | | | 90 | | | | | 95 | | |
| Ser | Ser | Asn | Ser | Gly | Arg | Leu | Ala | Leu | Pro | Arg | Leu | Arg | Ser | Leu | Cys | |
| | | | 100 | | | | | 105 | | | | | 110 | | | |
| Pro | Leu | Gly | Val | Ala | Arg | Pro | Arg | Cys | Cys | Arg | Ala | Leu | Ala | Arg | Cys | |
| | | 115 | | | | | 120 | | | | | 125 | | | | |
| Cys | Cys | Ser | Ser | Ser | Pro | Arg | Thr | Ala | Ala | Trp | Ala | Arg | Arg | Ala | Gly | |
| | 130 | | | | | 135 | | | | | 140 | | | | | |
| Ser | Ser | Ser | Leu | Ala | Ser | Pro | Thr | Ser | Pro | Thr | Ser | Ala | Glu | Leu | Gln | |
| 145 | | | | | 150 | | | | | 155 | | | | | 160 | |

| | | | | | | | | | | | | | | | |
|-----|------------|------------|------------|------------|-----|------------|------------|------------|------------|-----|------------|------------|------------|------------|-----|
| Ala | His | Pro | Gly | Gln 165 | Pro | Ala | Ala | Val | Pro 170 | Arg | His | Arg | Ile | Pro 175 | Glu |
| His | Ala | Ala | Ala 180 | Gln | Pro | Ala | Gly | Pro 185 | Arg | Asp | His | Glu | Gly 190 | Gly | Ala |
| Gly | Ala | Gly 195 | Arg | Arg | Leu | Asp | Pro 200 | Ala | Gly | His | Glu | Ala 205 | Val | Pro | Pro |
| Gly | His 210 | Gln | Glu | Val | Pro | Val 215 | Leu | Ala | Leu | Arg | Pro 220 | Arg | Leu | Pro | Arg |

<210> 431
 <211> 408
 <212> PRT
 <213> homo sapiens

<400> 431

| | | | | | | | | | | | | | | | |
|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Pro 1 | Ala | Leu | Leu | Gly 5 | Leu | Pro | Phe | Ile | Gly 10 | Ser | Ser | Leu | Ala | Pro 15 | Pro |
| Thr | Leu | Gln | Ile 20 | Cys | Ile | Lys | Lys | Ala 25 | Lys | Lys | Thr | Leu | Ala 30 | Val | Pro |
| Gln | Gln | Arg 35 | Leu | Ile | Leu | Leu | Pro 40 | Arg | Val | Gly | Ala | Pro 45 | Arg | Ser | Cys |
| Ala | Arg 50 | Ala | Cys | Ser | Ala | Ser 55 | Pro | Ala | Leu | Ser | Ser 60 | Arg | Cys | Pro | Ala |
| Ser 65 | Pro | Arg | Pro | Ser | Arg 70 | Arg | Leu | Pro | Ala | Phe 75 | Arg | Gly | Pro | Glu | Ser 80 |
| His | Pro | Ala | Lys | Arg 85 | Ala | Gly | Pro | Gly | Gln 90 | Ala | Arg | Thr | Pro | Ala 95 | Ala |
| Ser | Pro | Phe | Pro 100 | Gly | Ser | Ala | Pro | Ser 105 | Ala | Pro | Ser | Gly | Ser 110 | Arg | Ala |
| His | Asp | Ala 115 | Ala | Gly | Pro | Trp | Leu 120 | Ala | Ala | Ala | Ala | Leu 125 | Pro | Arg | Leu |
| Ala | Leu 130 | Leu | Pro | Gly | Leu | Gly 135 | Ala | Arg | Ala | Leu | Pro 140 | Leu | Trp | Pro | Ala |
| Arg 145 | Leu | Leu | Leu | Gln | Ala 150 | Gln | Asn | Cys | Lys | Pro 155 | Ile | Pro | Ala | Asn | Leu 160 |
| Gln | Leu | Cys | His | Gly 165 | Ile | Glu | Tyr | Gln | Asn 170 | Met | Arg | Leu | Pro | Asn 175 | Leu |
| Leu | Gly | His | Glu 180 | Thr | Met | Lys | Glu | Val 185 | Leu | Glu | Gln | Ala | Gly 190 | Ala | Trp |
| Ile | Pro | Leu 195 | Val | Met | Lys | Gln | Cys 200 | His | Pro | Asp | Thr | Lys 205 | Lys | Phe | Leu |
| Cys | Ser 210 | Leu | Phe | Ala | Pro | Val 215 | Cys | Leu | Asp | Asp | Leu 220 | Asp | Glu | Thr | Ile |
| Gln 225 | Pro | Cys | His | Ser | Leu 230 | Cys | Val | Gln | Val | Lys 235 | Asp | Arg | Cys | Ala | Pro 240 |

| | | | | | | | | | | | | | | | |
|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Val | Met | Ser | Ala | Phe 245 | Gly | Phe | Pro | Trp | Pro 250 | Asp | Met | Leu | Glu | Cys 255 | Asp |
| Arg | Phe | Pro | Gln 260 | Asp | Asn | Asp | Leu | Cys 265 | Ile | Pro | Leu | Ala | Ser 270 | Ser | Asp |
| His | Leu | Leu 275 | Pro | Ala | Thr | Glu | Glu 280 | Ala | Pro | Lys | Val | Cys 285 | Glu | Ala | Cys |
| Lys | Asn 290 | Lys | Asn | Asp | Asp | Asp 295 | Asn | Asp | Ile | Met | Glu 300 | Thr | Leu | Cys | Lys |
| Asn 305 | Asp | Phe | Ala | Leu | Lys 310 | Ile | Lys | Val | Lys | Glu 315 | Ile | Thr | Tyr | Ile | Asn 320 |
| Arg | Asp | Thr | Lys | Ile 325 | Ile | Leu | Glu | Thr | Lys 330 | Ser | Lys | Thr | Ile | Tyr 335 | Lys |
| Leu | Asn | Gly | Val 340 | Ser | Glu | Arg | Asp | Leu 345 | Lys | Lys | Ser | Val | Leu 350 | Trp | Leu |
| Lys | Asp | Ser 355 | Leu | Gln | Cys | Thr | Cys 360 | Glu | Glu | Met | Asn | Asp 365 | Ile | Asn | Ala |
| Pro | Tyr 370 | Leu | Val | Met | Gly | Gln 375 | Lys | Gln | Gly | Gly | Glu 380 | Leu | Val | Ile | Thr |
| Ser 385 | Val | Lys | Arg | Trp | Gln 390 | Lys | Gly | Gln | Arg | Glu 395 | Phe | Lys | Arg | Ile | Ser 400 |
| Arg | Ser | Ile | Arg | Lys 405 | Leu | Gln | Cys | | | | | | | | |

<210> 432
 <211> 323
 <212> PRT
 <213> homo sapiens

<400> 432

| | | | | | | | | | | | | | | | |
|-----------|-----------|-----------|------------|-----------|-----------|-----------|-----------|------------|-----------|-----------|-----------|-----------|------------|-----------|-----------|
| Val 1 | Ile | Ser | Phe | Thr 5 | Phe | Ile | Phe | Ser | Ala 10 | Lys | Ser | Phe | Leu | Gln 15 | Ser |
| Val | Ser | Ile | Met 20 | Ser | Leu | Ser | Ser | Ser 25 | Phe | Leu | Phe | Leu | Gln 30 | Ala | Ser |
| His | Thr | Phe 35 | Gly | Ala | Ser | Ser | Val 40 | Ala | Gly | Arg | Arg | Trp 45 | Ser | Leu | Leu |
| Ala | Arg 50 | Gly | Met | Gln | Arg | Ser 55 | Leu | Ser | Trp | Gly | Lys 60 | Arg | Ser | His | Ser |
| Ser 65 | Met | Ser | Gly | Gln | Gly 70 | Lys | Pro | Lys | Ala | Asp 75 | Met | Thr | Gly | Ala | Gln 80 |
| Arg | Ser | Phe | Thr | Cys 85 | Thr | Gln | Ser | Glu | Trp 90 | His | Gly | Trp | Met | Val 95 | Ser |
| Ser | Arg | Ser | Ser 100 | Arg | Gln | Thr | Gly | Ala 105 | Lys | Ser | Glu | His | Arg 110 | Asn | Phe |
| Leu | Val | Ser | Gly | Trp | His | Cys | Phe | Met | Thr | Ser | Gly | Ile | Gln | Ala | Pro |

| 115 | | | | | | 120 | | | | | 125 | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Cys | Ser | Ser | Thr | Ser | Phe | Met | Val | Ser | Trp | Pro | Ser | Arg | Leu | Gly |
| | 130 | | | | | 135 | | | | | 140 | | | | |
| Ser | Arg | Met | Phe | Trp | Tyr | Ser | Met | Pro | Trp | His | Ser | Cys | Arg | Leu | Ala |
| 145 | | | | | 150 | | | | | 155 | | | | | 160 |
| Gly | Met | Gly | Leu | Gln | Phe | Cys | Ala | Cys | Arg | Arg | Ser | Arg | Ala | Gly | Gln |
| | | | | 165 | | | | | 170 | | | | | 175 | |
| Arg | Gly | Arg | Ala | Arg | Ala | Pro | Ser | Pro | Gly | Ser | Ser | Ala | Arg | Arg | Gly |
| | | | 180 | | | | | 185 | | | | | 190 | | |
| Arg | Ala | Ala | Ala | Ala | Ser | Gln | Gly | Pro | Ala | Ala | Ser | Trp | Ala | Arg | Asp |
| | | 195 | | | | | 200 | | | | | 205 | | | |
| Pro | Glu | Gly | Ala | Glu | Gly | Ala | Glu | Pro | Gly | Lys | Gly | Glu | Ala | Ala | Gly |
| | 210 | | | | | 215 | | | | | 220 | | | | |
| Val | Arg | Ala | Cys | Pro | Gly | Pro | Ala | Leu | Phe | Ala | Gly | Cys | Asp | Ser | Gly |
| 225 | | | | | 230 | | | | | 235 | | | | | 240 |
| Pro | Arg | Lys | Ala | Gly | Ser | Arg | Arg | Leu | Gly | Arg | Gly | Glu | Ala | Gly | His |
| | | | | 245 | | | | | 250 | | | | | 255 | |
| Arg | Glu | Asp | Ser | Ala | Gly | Glu | Ala | Leu | Gln | Ala | Arg | Ala | Gln | Leu | Arg |
| | | | 260 | | | | | 265 | | | | | 270 | | |
| Gly | Ala | Pro | Thr | Arg | Gly | Ser | Arg | Met | Ser | Arg | Cys | Trp | Gly | Thr | Ala |
| | | 275 | | | | | 280 | | | | | 285 | | | |
| Arg | Val | Phe | Leu | Ala | Phe | Phe | Met | Gln | Ile | Trp | Arg | Val | Gly | Gly | Ala |
| | 290 | | | | | 295 | | | | | 300 | | | | |
| Arg | Glu | Glu | Pro | Met | Lys | Gly | Asn | Pro | Arg | Arg | Ala | Gly | His | Tyr | Phe |
| 305 | | | | | 310 | | | | | 315 | | | | | 320 |
| Leu | Gly | Leu | | | | | | | | | | | | | |

<210> 433

<211> 333

<212> PRT

<213> homo sapiens

<400> 433

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Arg | Gly | Arg | Thr | Trp | Glu | Leu | Phe | Leu | Ala | Gly | Arg | Arg | Val | Leu | Val |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Thr | Gly | Ala | Gly | Lys | Gly | Ile | Gly | Arg | Gly | Thr | Val | Gln | Ala | Leu | His |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Ala | Thr | Gly | Ala | Arg | Val | Val | Ala | Val | Ser | Arg | Thr | Gln | Ala | Asp | Leu |
| | | 35 | | | | | 40 | | | | | 45 | | | |
| Asp | Ser | Leu | Val | Arg | Glu | Cys | Pro | Gly | Ile | Glu | Pro | Val | Cys | Val | Asp |
| | 50 | | | | | 55 | | | | | 60 | | | | |
| Leu | Gly | Asp | Trp | Glu | Ala | Thr | Glu | Arg | Ala | Leu | Gly | Ser | Val | Gly | Pro |
| 65 | | | | | 70 | | | | | 75 | | | | | 80 |
| Val | Asp | Leu | Arg | Gly | Asp | Cys | Ala | Asp | Met | Glu | Leu | Phe | Leu | Ala | Gly |

| 85 | | | | | | | | 90 | | | | | 95 | | |
|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Arg | Arg | Val | Leu 100 | Val | Thr | Gly | Ala | Gly 105 | Lys | Gly | Ile | Gly | Arg 110 | Gly | Thr |
| Val | Gln | Ala 115 | Leu | His | Ala | Thr | Gly 120 | Ala | Arg | Val | Val | Ala 125 | Val | Ser | Arg |
| Thr | Gln 130 | Ala | Asp | Leu | Asp | Ser 135 | Leu | Val | Arg | Glu | Cys 140 | Pro | Gly | Ile | Glu |
| Pro 145 | Val | Cys | Val | Asp | Leu 150 | Gly | Asp | Trp | Glu | Ala 155 | Thr | Glu | Arg | Ala | Leu 160 |
| Gly | Ser | Val | Gly | Pro 165 | Val | Asp | Leu | Leu | Val 170 | Asn | Asn | Ala | Ala | Val 175 | Ala |
| Leu | Leu | Gln | Pro 180 | Phe | Leu | Glu | Val | Thr 185 | Lys | Glu | Ala | Phe | Asp 190 | Arg | Ser |
| Phe | Glu | Val 195 | Asn | Leu | Arg | Ala | Val 200 | Ile | Gln | Val | Ser | Gln 205 | Ile | Val | Ala |
| Arg | Gly 210 | Leu | Ile | Ala | Arg | Gly 215 | Val | Pro | Gly | Ala | Ile 220 | Val | Asn | Val | Ser |
| Ser 225 | Gln | Cys | Ser | Gln | Arg 230 | Ala | Val | Thr | Asn | His 235 | Ser | Val | Tyr | Cys | Ser 240 |
| Thr | Lys | Gly | Ala | Leu 245 | Asp | Met | Leu | Thr | Lys 250 | Val | Met | Ala | Leu | Glu 255 | Leu |
| Gly | Pro | His | Lys 260 | Ile | Arg | Val | Asn | Ala 265 | Val | Asn | Pro | Thr | Val 270 | Val | Met |
| Thr | Ser | Met 275 | Gly | Gln | Ala | Thr | Trp 280 | Ser | Asp | Pro | His | Lys 285 | Ala | Lys | Thr |
| Met | Leu 290 | Asn | Arg | Ile | Pro | Leu 295 | Gly | Lys | Phe | Ala | Glu 300 | Val | Glu | His | Val |
| Val 305 | Asn | Ala | Ile | Leu | Phe 310 | Leu | Leu | Ser | Asp | Arg 315 | Ser | Gly | Met | Thr | Thr 320 |
| Gly | Ser | Thr | Leu | Pro 325 | Val | Glu | Gly | Gly | Phe 330 | Trp | Ala | Cys | | | |

<210> 434

<211> 210

<212> PRT

<213> homo sapiens

<400> 434

| | | | | | | | | | | | | | | | |
|----------|-----|-----------|-----------|----------|-----|-----|-----------|-----------|-----------|-----|-----|-----------|-----------|-----------|-----|
| Ala 1 | Pro | Gly | His | Asn 5 | Leu | Arg | His | Leu | Asp 10 | Asp | Arg | Thr | Gln | Val 15 | His |
| Leu | Lys | Gly | Ser 20 | Val | Lys | Gly | Leu | Leu 25 | Gly | Asp | Leu | Gln | Glu 30 | Gly | Leu |
| Gln | Gln | Gly 35 | Asp | Ser | Gly | Val | Val 40 | His | Gln | Gln | Val | His 45 | Gly | Ala | His |

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Ala | Gln | Arg | Pro | Leu | Gly | Gly | Leu | Pro | Val | Thr | Gln | Val | His | Ala |
| | 50 | | | | | 55 | | | | | 60 | | | | |
| His | Gly | Phe | Tyr | Pro | Arg | Ala | Leu | Ala | Asp | Lys | Ala | Val | Lys | Ile | Arg |
| 65 | | | | | 70 | | | | | 75 | | | | | 80 |
| Leu | Ser | Pro | Ala | His | Ser | His | His | Pro | Arg | Ala | Arg | Arg | Val | Gln | Arg |
| | | | | 85 | | | | | 90 | | | | | 95 | |
| Leu | Asp | Arg | Ala | Ala | Pro | Tyr | Thr | Phe | Ala | Cys | Pro | Gly | Asp | Gln | His |
| | | | 100 | | | | | 105 | | | | | 110 | | |
| Pro | Ala | Ala | Arg | Glu | Glu | Gln | Leu | His | Val | Gly | Ala | Val | Ser | Ala | Gln |
| | | 115 | | | | | 120 | | | | | 125 | | | |
| Val | His | Gly | Ala | His | Ala | Ala | Gln | Arg | Pro | Leu | Gly | Gly | Leu | Pro | Val |
| | 130 | | | | | 135 | | | | | 140 | | | | |
| Thr | Gln | Val | His | Ala | His | Gly | Phe | Tyr | Pro | Arg | Ala | Leu | Ala | Asp | Lys |
| 145 | | | | | 150 | | | | | 155 | | | | | 160 |
| Ala | Val | Lys | Ile | Arg | Leu | Ser | Pro | Ala | His | Ser | His | His | Pro | Arg | Ala |
| | | | | 165 | | | | | 170 | | | | | 175 | |
| Arg | Arg | Val | Gln | Arg | Leu | Asp | Arg | Ala | Ala | Pro | Tyr | Thr | Phe | Ala | Cys |
| | | | 180 | | | | | 185 | | | | | 190 | | |
| Pro | Gly | Asp | Gln | His | Pro | Ala | Ala | Arg | Glu | Glu | Gln | Leu | Pro | Cys | Ser |
| | | 195 | | | | | 200 | | | | | 205 | | | |
| Pro | Thr | | | | | | | | | | | | | | |
| | 210 | | | | | | | | | | | | | | |

<210> 435

<211> 132

<212> PRT

<213> homo sapiens

<400> 435

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Phe | Phe | Phe | Phe | Phe | Phe | Phe | Phe | Phe | Leu | Gly | Ser | Arg | Ile | Arg | Phe |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Ile | Gly | Gly | Ile | Gly | Gly | Arg | Met | Ser | Thr | Ala | Trp | Gly | Leu | Arg | Cys |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Val | Glu | Gly | Ala | Gln | Gln | Ala | Gln | Lys | Pro | Pro | Ser | Thr | Gly | Lys | Val |
| | | 35 | | | | | 40 | | | | | 45 | | | |
| Glu | Pro | Val | Val | Met | Pro | Leu | Arg | Ser | Leu | Ser | Arg | Lys | Arg | Met | Ala |
| | 50 | | | | | 55 | | | | | 60 | | | | |
| Phe | Thr | Thr | Cys | Ser | Thr | Ser | Ala | Asn | Leu | Pro | Ser | Gly | Ile | Arg | Phe |
| 65 | | | | | 70 | | | | | 75 | | | | | 80 |
| Ser | Ile | Val | Leu | Ala | Leu | Trp | Gly | Ser | Leu | Gln | Val | Ala | Trp | Pro | Met |
| | | | | 85 | | | | | 90 | | | | | 95 | |
| Asp | Val | Ile | Thr | Thr | Val | Gly | Phe | Thr | Ala | Phe | Thr | Arg | Ile | Leu | Trp |
| | | | 100 | | | | | 105 | | | | | 110 | | |
| Gly | Pro | Ser | Ser | Arg | Ala | Ile | Thr | Leu | Val | Ser | Met | Ser | Arg | Ala | Pro |
| | | 115 | | | | | 120 | | | | | 125 | | | |

Leu Val Glu Gln
130

<210> 436
<211> 94
<212> PRT
<213> homo sapiens

<400> 436

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|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Lys 1 | Ala | Lys | Ser | Trp 5 | Val | Pro | Ser | Asp | Phe 10 | Arg | Phe | Gln | Glu | Leu 15 | Pro |
| Glu | Asn | Thr | Arg 20 | Ser | Gln | Arg | Val | Ile 25 | Phe | Trp | Ser | Leu | Phe 30 | Cys | Arg |
| Asp | Ser | Trp 35 | Glu | Tyr | Gly | His | Pro 40 | Ala | Pro | Arg | Cys | Gly 45 | Asn | Glu | Ser |
| Ser | Arg 50 | Ser | Gly | Glu | Ala | Ala 55 | Leu | Ala | Asp | Val | Gln 60 | Leu | Ala | Ala | Pro |
| Val 65 | Ser | Asn | Gln | Leu | His 70 | Pro | Asp | Gly | Val | Glu 75 | Asp | Arg | Gly | Val | Gly 80 |
| Gly | Leu | Leu | Pro | Glu 85 | Leu | His | His | Ala | Glu 90 | Pro | Tyr | Leu | Val | | |

<210> 437
<211> 70
<212> PRT
<213> homo sapiens

<400> 437

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|-----------|-----------|-----------|-----------|----------|-----------|-----------|-----------|-----------|-----------|-----|-----------|-----------|-----------|-----------|-----|
| Phe 1 | Ser | Gly | Val | Cys 5 | Phe | Ala | Gly | Ile | Ala 10 | Gly | Ser | Met | Ala | Thr 15 | Leu |
| Leu | His | Asp | Ala 20 | Val | Met | Asn | Pro | Ala 25 | Glu | Val | Val | Lys | Gln 30 | Arg | Leu |
| Gln | Met | Tyr 35 | Asn | Ser | Gln | His | Arg 40 | Ser | Ala | Ile | Ser | Cys 45 | Ile | Arg | Thr |
| Val | Trp 50 | Arg | Thr | Glu | Gly | Leu 55 | Gly | Ala | Phe | Tyr | Arg 60 | Ser | Tyr | Thr | Thr |
| Pro 65 | Ser | Pro | Ile | Ser | Cys 70 | | | | | | | | | | |

<210> 438
<211> 98
<212> PRT
<213> homo sapiens

<400> 438

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|----------|-----|-----|-----------|----------|-----|-----|-----|-----------|-----------|-----|-----|-----|-----------|-----------|-----|
| Lys 1 | Ala | Pro | Asn | Pro 5 | Ser | Val | Leu | His | Thr 10 | Val | Arg | Met | Gln | Leu 15 | Ile |
| Ala | Asp | Arg | Cys 20 | Cys | Glu | Leu | Tyr | Ile 25 | Cys | Lys | Arg | Cys | Phe 30 | Thr | Thr |

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ser | Ala | Gly | Phe | Ile | Thr | Ala | Ser | Trp | Ser | Arg | Val | Ala | Ile | Leu | Pro |
| | | 35 | | | | | 40 | | | | | 45 | | | |
| Ala | Ile | Pro | Ala | Lys | Gln | Thr | Pro | Glu | Asn | Tyr | Pro | Leu | Arg | Ser | Gly |
| | 50 | | | | | 55 | | | | | 60 | | | | |
| Val | Leu | Arg | Lys | Phe | Leu | Glu | Pro | Lys | Ile | Arg | Arg | Asn | Pro | Gly | Leu |
| 65 | | | | | 70 | | | | | 75 | | | | | 80 |
| Ser | Phe | Leu | Arg | Ser | Lys | Met | Tyr | Tyr | Gln | Ser | Ala | Gln | Val | Ser | Thr |
| | | | | 85 | | | | | 90 | | | | | 95 | |

Asp Ser

<210> 439
 <211> 270
 <212> PRT
 <213> homo sapiens

<400> 439

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|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Arg | Ser | Val | Val | Arg | Arg | Cys | Leu | Lys | Met | Ala | Ala | Glu | Glu | Pro | Gln |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Gln | Gln | Lys | Gln | Glu | Pro | Leu | Gly | Ser | Asp | Ser | Glu | Gly | Val | Asn | Cys |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Leu | Ala | Tyr | Asp | Glu | Ala | Ile | Met | Ala | Gln | Gln | Asp | Arg | Ile | Gln | Gln |
| | | 35 | | | | | 40 | | | | | 45 | | | |
| Glu | Ile | Ala | Val | Gln | Asn | Pro | Leu | Val | Ser | Glu | Arg | Leu | Glu | Leu | Ser |
| | 50 | | | | | 55 | | | | | 60 | | | | |
| Val | Leu | Tyr | Lys | Glu | Tyr | Ala | Glu | Asp | Asp | Asn | Ile | Tyr | Gln | Gln | Lys |
| 65 | | | | | 70 | | | | | 75 | | | | | 80 |
| Ile | Lys | Asp | Leu | His | Lys | Lys | Tyr | Ser | Tyr | Ile | Arg | Lys | Thr | Arg | Pro |
| | | | | 85 | | | | | 90 | | | | | 95 | |
| Asp | Gly | Asn | Cys | Phe | Tyr | Arg | Ala | Phe | Gly | Phe | Ser | His | Leu | Glu | Ala |
| | | | 100 | | | | | 105 | | | | | 110 | | |
| Leu | Leu | Asp | Asp | Ser | Lys | Glu | Leu | Gln | Arg | Phe | Lys | Ala | Val | Ser | Ala |
| | | 115 | | | | | 120 | | | | | 125 | | | |
| Lys | Ser | Lys | Glu | Asp | Leu | Val | Ser | Gln | Gly | Phe | Thr | Glu | Phe | Thr | Ile |
| | 130 | | | | | 135 | | | | | 140 | | | | |
| Glu | Asp | Phe | His | Asn | Thr | Phe | Met | Asp | Leu | Ile | Glu | Gln | Val | Glu | Lys |
| 145 | | | | | 150 | | | | | 155 | | | | | 160 |
| Gln | Thr | Ser | Val | Ala | Asp | Leu | Leu | Ala | Ser | Phe | Asn | Asp | Gln | Ser | Thr |
| | | | | 165 | | | | | 170 | | | | | 175 | |
| Ser | Asp | Tyr | Leu | Val | Val | Tyr | Leu | Arg | Leu | Leu | Thr | Ser | Gly | Tyr | Leu |
| | | | 180 | | | | | 185 | | | | | 190 | | |
| Gln | Arg | Glu | Ser | Lys | Phe | Phe | Glu | His | Phe | Ile | Glu | Gly | Gly | Arg | Thr |
| | | 195 | | | | | 200 | | | | | 205 | | | |
| Val | Lys | Glu | Phe | Cys | Gln | Gln | Glu | Val | Glu | Pro | Met | Cys | Lys | Glu | Ser |
| | 210 | | | | | 215 | | | | | 220 | | | | |

| | | | | | | | | | | | | | | | |
|------------|-----|-----|------------|------------|------------|-----|-----|------------|------------|------------|-----|-----|------------|------------|------------|
| Asp 225 | His | Ile | His | Ile | Ile 230 | Ala | Leu | Ala | Gln | Ala 235 | Leu | Ser | Val | Ser | Ile 240 |
| Gln | Val | Glu | Tyr | Met 245 | Asp | Arg | Gly | Glu | Gly 250 | Gly | Thr | Thr | Asn | Pro 255 | His |
| Ile | Phe | Pro | Glu 260 | Gly | Phe | Arg | Ala | Gln 265 | Gly | Leu | Thr | Leu | Phe 270 | | |

<210> 440
 <211> 145
 <212> PRT
 <213> homo sapiens

<400> 440

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| Arg 1 | Trp | Arg | Arg | Arg 5 | Asn | Leu | Ser | Ser | Arg 10 | Ser | Arg | Ser | Arg | Trp 15 | Ala |
| Ala | Thr | Pro | Lys 20 | Val | Leu | Thr | Val | Trp 25 | Pro | Met | Met | Lys | Pro 30 | Ser | Trp |
| Leu | Ser | Arg 35 | Thr | Glu | Phe | Ser | Lys 40 | Arg | Leu | Leu | Cys | Arg 45 | Thr | Leu | Trp |
| Cys | Gln 50 | Ser | Gly | Trp | Ser | Ser 55 | Arg | Ser | Tyr | Thr | Arg 60 | Ser | Met | Leu | Lys |
| Met 65 | Thr | Thr | Ser | Ile | Asn 70 | Arg | Arg | Ser | Arg | Thr 75 | Ser | Thr | Lys | Ser | Thr 80 |
| Arg | Thr | Ser | Ala | Arg 85 | Pro | Gly | Leu | Thr | Ala 90 | Thr | Val | Ser | Ile | Gly 95 | Leu |
| Ser | Asp | Ser | Pro 100 | Thr | Trp | Arg | His | Cys 105 | Trp | Met | Thr | Ala | Arg 110 | Ser | Cys |
| Ser | Gly | Ser 115 | Arg | Leu | Cys | Leu | Pro 120 | Arg | Ala | Arg | Lys | Thr 125 | Trp | Cys | Pro |
| Arg | Ala 130 | Ser | Leu | Asn | Ser | Gln 135 | Leu | Arg | Ile | Ser | Thr 140 | Thr | Arg | Ser | Trp |
| Thr 145 | | | | | | | | | | | | | | | |

<210> 441
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 <212> PRT
 <213> homo sapiens

<400> 441

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| Ile 1 | Ala | Pro | Ser | Arg 5 | Leu | Lys | Gln | Gly | Lys 10 | Thr | Leu | Gly | Ser | Glu 15 | Ala |
| Leu | Arg | Glu | Asp 20 | Val | Arg | Ile | Gly | Gly 25 | Ala | Ala | Leu | Ala | Ala 30 | Val | His |
| Val | Leu | His 35 | Leu | Asp | Gly | His | Ala 40 | Glu | Gly | Leu | Gly | Gln 45 | Arg | Asn | Asp |

| | | | | | | | | | | | | | | | |
|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Val | Asp 50 | Val | Val | Ala | Leu | Leu 55 | Ala | His | Gly | Leu | His 60 | Leu | Leu | Leu | Ala |
| Glu 65 | Leu | Leu | Asp | Ser | Pro 70 | Ser | Thr | Leu | Asp | Glu 75 | Val | Leu | Glu | Glu | Leu 80 |
| Ala | Leu | Ala | Leu | Gln 85 | Val | Ala | Arg | Gly | Glu 90 | Gln | Pro | Gln | Val | Asp 95 | His |
| Lys | Val | Val | Gly 100 | Gly | Ala | Leu | Val | Ile 105 | Glu | Gly | Gly | Gln | Gln 110 | Val | Gly |
| Asp | Arg | Gly 115 | Leu | Leu | Leu | His | Leu 120 | Leu | Asn | Gln | Val | His 125 | Glu | Arg | Val |
| Val | Glu 130 | Ile | Leu | Asn | Cys | Glu 135 | Phe | Ser | Glu | Ala | Leu 140 | Gly | His | Gln | Val |
| Phe 145 | Leu | Ala | Leu | Gly | Arg 150 | His | Ser | Leu | Glu | Pro 155 | Leu | Gln | Leu | Leu | Ala 160 |
| Val | Ile | Gln | Gln | Cys 165 | Leu | Gln | Val | Gly | Glu 170 | Ser | Glu | Ser | Pro | Ile 175 | Glu |
| Thr | Val | Ala | Val 180 | Arg | Pro | Gly | Leu | Ala 185 | Asp | Val | Arg | Val | Leu 190 | Phe | Val |
| Glu | Val | Leu 195 | Asp | Leu | Leu | Leu | Ile 200 | Asp | Val | Val | Ile | Phe 205 | Ser | Ile | Leu |
| Leu | Val 210 | | | | | | | | | | | | | | |

<210> 442

<211> 322

<212> PRT

<213> homo sapiens

<400> 442

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| Asn 1 | Ser | Glu | Arg | Gly 5 | Arg | Leu | Gln | Ala | Met 10 | Met | Thr | His | Leu | His 15 | Val |
| Lys | Ser | Thr | Glu 20 | Pro | Lys | Ala | Ala | Pro 25 | Gln | Pro | Leu | Asn | Leu 30 | Val | Ser |
| Ser | Val | Thr 35 | Leu | Ser | Lys | Ser | Ala 40 | Ser | Glu | Ala | Ser | Pro 45 | Gln | Ser | Leu |
| Pro | His 50 | Thr | Pro | Thr | Thr | Pro 55 | Thr | Ala | Pro | Leu | Thr 60 | Pro | Val | Thr | Gln |
| Gly 65 | Pro | Ser | Val | Ile | Thr 70 | Thr | Thr | Ser | Met | His 75 | Thr | Val | Gly | Pro | Ile 80 |
| Arg | Arg | Arg | Tyr | Ser 85 | Asp | Lys | Tyr | Asn | Val 90 | Pro | Ile | Ser | Ser | Ala 95 | Asp |
| Ile | Ala | Gln | Asn 100 | Gln | Glu | Phe | Tyr | Lys 105 | Asn | Ala | Glu | Val | Arg 110 | Pro | Pro |
| Phe | Thr | Tyr 115 | Ala | Ser | Leu | Ile | Arg 120 | Gln | Ala | Ile | Leu | Glu 125 | Ser | Pro | Glu |

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Lys | Gln | Leu | Thr | Leu | Asn | Glu | Ile | Tyr | Asn | Trp | Phe | Thr | Arg | Met | Phe |
| | 130 | | | | | 135 | | | | | 140 | | | | |
| Ala | Tyr | Phe | Arg | Arg | Asn | Ala | Ala | Thr | Trp | Lys | Asn | Ala | Val | Arg | His |
| 145 | | | | | 150 | | | | | 155 | | | | | 160 |
| Asn | Leu | Ser | Leu | His | Lys | Cys | Phe | Val | Arg | Val | Glu | Asn | Val | Lys | Gly |
| | | | | 165 | | | | | 170 | | | | | 175 | |
| Ala | Val | Trp | Thr | Val | Asp | Glu | Val | Glu | Phe | Gln | Lys | Arg | Arg | Pro | Gln |
| | | | 180 | | | | | 185 | | | | | 190 | | |
| Lys | Ile | Ser | Gly | Asn | Pro | Ser | Leu | Ile | Lys | Asn | Met | Gln | Ser | Ser | His |
| | | 195 | | | | | 200 | | | | | 205 | | | |
| Ala | Tyr | Cys | Thr | Pro | Leu | Asn | Ala | Ala | Leu | Gln | Ala | Ser | Met | Ala | Glu |
| | 210 | | | | | 215 | | | | | 220 | | | | |
| Asn | Ser | Ile | Pro | Leu | Tyr | Thr | Thr | Ala | Ser | Met | Gly | Asn | Pro | Thr | Leu |
| 225 | | | | | 230 | | | | | 235 | | | | | 240 |
| Gly | Asn | Leu | Ala | Ser | Ala | Ile | Arg | Glu | Glu | Leu | Asn | Gly | Ala | Met | Glu |
| | | | | 245 | | | | | 250 | | | | | 255 | |
| His | Thr | Asn | Ser | Asn | Glu | Ser | Asp | Ser | Ser | Pro | Gly | Arg | Ser | Pro | Met |
| | | | 260 | | | | | 265 | | | | | 270 | | |
| Gln | Ala | Val | His | Pro | Val | His | Val | Lys | Glu | Glu | Pro | Leu | Asp | Pro | Glu |
| | | 275 | | | | | 280 | | | | | 285 | | | |
| Glu | Ala | Glu | Gly | Pro | Leu | Ser | Leu | Val | Thr | Thr | Ala | Asn | His | Ser | Pro |
| | 290 | | | | | 295 | | | | | 300 | | | | |
| Asp | Phe | Asp | His | Asp | Arg | Asp | Tyr | Glu | Asp | Glu | Pro | Val | Asn | Glu | Asp |
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| Met | Glu | | | | | | | | | | | | | | |

<210> 443

<211> 103

<212> PRT

<213> homo sapiens

<400> 443

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| Phe | Gly | Thr | Arg | Ala | Pro | Ala | Ser | His | Asp | Asp | Pro | Pro | Ala | Cys | Glu |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Val | Tyr | Arg | Thr | Gln | Ser | Cys | Pro | Ser | Ala | Pro | Glu | Ser | Gly | Ile | Lys |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Cys | His | Pro | Leu | Gln | Val | Arg | Ile | Gly | Gly | Phe | Ser | Thr | Glu | Leu | Thr |
| | | 35 | | | | | 40 | | | | | 45 | | | |
| Ser | Tyr | Ser | Asn | Asp | Pro | Asn | Arg | Pro | Pro | Asp | Ser | Arg | His | Pro | Arg |
| | 50 | | | | | 55 | | | | | 60 | | | | |
| Pro | Leu | Cys | His | His | Asn | His | Gln | His | Ala | His | Gly | Gly | Thr | His | Pro |
| 65 | | | | | 70 | | | | | 75 | | | | | 80 |
| Gln | Ala | Val | Leu | Arg | Gln | Ile | Gln | Arg | Ala | His | Phe | Val | Ser | Arg | Tyr |
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Cys Ala Glu Pro Arg Ile Leu
100

<210> 444
<211> 101
<212> PRT
<213> homo sapiens

<400> 444

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| Ser 1 | Leu | Ser | Trp | Ser 5 | Lys | Ser | Gly | Leu | Trp 10 | Leu | Ala | Val | Val | Thr 15 | Lys |
| Asp | Arg | Gly | Pro 20 | Ser | Ala | Ser | Ser | Gly 25 | Ser | Arg | Gly | Ser | Ser 30 | Leu | Thr |
| Cys | Thr | Gly 35 | Cys | Thr | Ala | Cys | Ile 40 | Gly | Asp | Leu | Pro | Gly 45 | Leu | Leu | Ser |
| Leu | Ser 50 | Leu | Leu | Leu | Val | Cys 55 | Ser | Ile | Ala | Pro | Phe 60 | Ser | Ser | Ser | Arg |
| Ile 65 | Ala | Leu | Ala | Lys | Leu 70 | Pro | Arg | Val | Gly | Phe 75 | Pro | Met | Glu | Ala | Val 80 |
| Val | Tyr | Arg | Gly | Ile 85 | Leu | Phe | Ser | Ala | Ile 90 | Glu | Ala | Cys | Lys | Ala 95 | Ala |
| Leu | Arg | Gly | Val 100 | Gln | | | | | | | | | | | |

<210> 445
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<212> PRT
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<400> 445

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| Leu 1 | Asp | Val | Gln | Val 5 | Lys | Asp | Asp | Ser | Arg 10 | Ala | Leu | Thr | Leu | Gly 15 | Ala |
| Leu | Thr | Leu | Pro 20 | Leu | Ala | Arg | Leu | Leu 25 | Thr | Ala | Pro | Glu | Leu 30 | Ile | Leu |
| Asp | Gln | Trp 35 | Phe | Gln | Leu | Ser | Ser 40 | Ser | Gly | Pro | Asn | Ser 45 | Arg | Leu | Tyr |
| Met | Lys 50 | Leu | Val | Met | Arg | Ile 55 | Leu | Tyr | Leu | Asp | Ser 60 | Ser | Glu | Ile | Cys |
| Phe 65 | Pro | Thr | Val | Pro | Gly 70 | Cys | Pro | Gly | Ala | Trp 75 | Asp | Val | Asp | Ser | Glu 80 |
| Asn | Pro | Gln | Arg | Gly 85 | Ser | Ser | Val | Asp | Ala 90 | Pro | Pro | Arg | Pro | Cys 95 | His |
| Thr | Thr | Pro | Asp 100 | Ser | Gln | Phe | Gly | Thr 105 | Glu | His | Val | Leu | Arg 110 | Ile | His |
| Val | Leu | Glu 115 | Ala | Gln | Asp | Leu | Ile 120 | Ala | Lys | Asp | Arg | Phe 125 | Leu | Gly | Gly |

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Val | Lys | Gly | Lys | Ser | Asp | Pro | Tyr | Val | Lys | Leu | Lys | Leu | Ala | Gly |
| | 130 | | | | | 135 | | | | | 140 | | | | |
| Arg | Ser | Phe | Arg | Ser | His | Val | Val | Arg | Glu | Asp | Leu | Asn | Pro | Arg | Trp |
| 145 | | | | | 150 | | | | | 155 | | | | | 160 |
| Asn | Glu | Val | Phe | Glu | Val | Ile | Val | Thr | Ser | Val | Pro | Gly | Gln | Glu | Leu |
| | | | | 165 | | | | | 170 | | | | | 175 | |
| Glu | Val | Glu | Val | Phe | Asp | Lys | Asp | Leu | Asp | Lys | Asp | Asp | Phe | Leu | Gly |
| | | | 180 | | | | | 185 | | | | | 190 | | |
| Arg | Cys | Lys | Val | Arg | Leu | Thr | Thr | Val | Leu | Asn | Ser | Gly | Phe | Leu | Asp |
| | | 195 | | | | | 200 | | | | | 205 | | | |
| Glu | Trp | Leu | Thr | Leu | Glu | Asp | Val | Pro | Ser | Gly | Arg | Leu | His | Leu | Arg |
| | 210 | | | | | 215 | | | | | 220 | | | | |
| Leu | Glu | Arg | Leu | Thr | Pro | Arg | Pro | Thr | Ala | Ala | Glu | Leu | Glu | Glu | Val |
| 225 | | | | | 230 | | | | | 235 | | | | | 240 |
| Leu | Gln | Val | Asn | Ser | Leu | Ile | Gln | Thr | Gln | Lys | Ser | Ala | Glu | Leu | Ala |
| | | | | 245 | | | | | 250 | | | | | 255 | |
| Ala | Ala | Leu | Leu | Ser | Ile | Tyr | Met | Glu | Arg | Ala | Glu | Asp | Leu | Pro | Leu |
| | | | 260 | | | | | 265 | | | | | 270 | | |
| Arg | Lys | Gly | Thr | Lys | His | Leu | Ser | Pro | Tyr | Ala | Thr | Leu | Thr | Val | Gly |
| | | 275 | | | | | 280 | | | | | 285 | | | |
| Asp | Ser | Ser | His | Lys | Thr | Lys | Thr | Ile | Ser | Gln | Thr | Ser | Ala | Pro | Val |
| | 290 | | | | | 295 | | | | | 300 | | | | |
| Trp | Asp | Glu | Ser | Ala | Ser | Phe | Leu | Ile | Arg | Lys | Pro | His | Thr | Glu | Ser |
| 305 | | | | | 310 | | | | | 315 | | | | | 320 |
| Leu | Glu | Leu | Gln | Val | Arg | Gly | Glu | Gly | Thr | Gly | Val | Leu | Gly | Ser | Leu |
| | | | 325 | | | | | | 330 | | | | | 335 | |
| Ser | Leu | Pro | Leu | Ser | Glu | Leu | Leu | Val | Ala | Asp | Gln | Leu | Cys | Leu | Asp |
| | | | 340 | | | | | 345 | | | | | 350 | | |
| Arg | Trp | Phe | Thr | Leu | Ser | Ser | Gly | Gln | Gly | Gln | Val | Leu | Leu | Arg | Ala |
| | | 355 | | | | | 360 | | | | | 365 | | | |
| Gln | Leu | Gly | Ile | Leu | Val | Ser | Gln | His | Ser | Gly | Val | Glu | Ala | His | Ser |
| | 370 | | | | | 375 | | | | | 380 | | | | |
| His | Ser | Tyr | Ser | His | Ser | Ser | Ser | Ser | Leu | Ser | Glu | Glu | Pro | Glu | Leu |
| 385 | | | | | 390 | | | | | 395 | | | | | 400 |
| Ser | Gly | Gly | Pro | Pro | His | Ile | Thr | Ser | Ser | Ala | Pro | Glu | Leu | Arg | Gln |
| | | | | 405 | | | | | 410 | | | | | 415 | |
| Arg | Leu | Thr | His | Val | Asp | Ser | Pro | Leu | Glu | Ala | Pro | Ala | Gly | Pro | Leu |
| | | | 420 | | | | | 425 | | | | | 430 | | |
| Gly | Gln | Val | Lys | Leu | Thr | Leu | Trp | Tyr | Tyr | Ser | Glu | Glu | Arg | Lys | Leu |
| | | 435 | | | | | 440 | | | | | 445 | | | |
| Val | Ser | Ile | Val | His | Gly | Cys | Arg | Ser | Leu | Arg | Gln | Asn | Gly | Arg | Asp |
| | 450 | | | | | 455 | | | | | 460 | | | | |

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 460

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|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|-----|------------|------------|------------|------------|
| Pro 465 | Pro | Asp | Pro | Tyr | Val 470 | Ser | Leu | Leu | Leu | Leu 475 | Pro | Asp | Lys | Asn | Arg 480 |
| Gly | Thr | Lys | Arg | Arg 485 | Thr | Ser | Gln | Lys | Lys 490 | Arg | Thr | Leu | Ser | Pro 495 | Glu |
| Phe | Asn | Glu | Arg 500 | Phe | Glu | Trp | Glu | Leu 505 | Pro | Leu | Asp | Glu | Ala 510 | Gln | Arg |
| Arg | Lys | Leu 515 | Asp | Val | Ser | Val | Lys 520 | Ser | Asn | Ser | Ser | Phe 525 | Met | Ser | Arg |
| Glu | Arg 530 | Asp | Cys | Trp | Gly | Arg 535 | Cys | Ser | Trp | Thr | | | | | |

<210> 446
 <211> 99
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 <213> homo sapiens

<400> 446

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| Leu 1 | Leu | Cys | Leu | Pro 5 | Ala | Phe | Val | Ser | Leu 10 | His | His | Arg | Leu | Asn 15 | Val |
| Met | Ser | Leu | Lys 20 | Leu | Gly | Ser | Lys | Gly 25 | Arg | Ala | Cys | Ala | Leu 30 | Gln | Pro |
| Phe | His | Leu 35 | Thr | Gly | Pro | Tyr | Ser 40 | Gly | Leu | Cys | Leu | Thr 45 | Lys | Glu | Lys |
| Asn | Arg 50 | Met | Phe | Pro | Leu | Leu 55 | His | Gly | Leu | Tyr | Pro 60 | Ser | Gly | Pro | Leu |
| Gly 65 | Arg | Gly | Pro | Glu | Leu 70 | Ala | Val | Ser | Cys | Phe 75 | Ala | Cys | Thr | Leu | Phe 80 |
| Ser | Leu | Pro | Pro | Asn 85 | Ser | Ser | Gly | Pro | Ser 90 | Val | Ser | Val | Pro | Gly 95 | Gln |
| Trp | Gln | His | | | | | | | | | | | | | |

<210> 447
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 <212> PRT
 <213> homo sapiens

<400> 447

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| Val 1 | Trp | Ile | Lys | Leu 5 | Phe | Thr | Cys | Ser | Thr 10 | Ser | Ser | Asn | Ser | Ala 15 | Ala |
| Val | Gly | Arg | Gly 20 | Val | Arg | Arg | Ser | Arg 25 | Arg | Lys | Cys | Arg | Arg 30 | Pro | Asp |
| Gly | Thr | Ser 35 | Ser | Arg | Val | Ser | His 40 | Ser | Ser | Arg | Lys | Pro 45 | Leu | Phe | Lys |
| Thr | Val 50 | Val | Arg | Arg | Thr | Leu 55 | His | Leu | Pro | Arg | Lys 60 | Ser | Ser | Leu | Ser |
| Lys 65 | Ser | Leu | Ser | Lys | Thr 70 | Ser | Thr | Ser | Ser | Ser 75 | Trp | Pro | Gly | Thr | Asp 80 |

| | | | | | | | | | | | | | | | |
|-----|-----|-----|------------|-----------|-----|-----|-----|------------|-----------|-----|-----|-----|------------|-----------|-----|
| Val | Thr | Ile | Thr | Ser 85 | Lys | Thr | Ser | Phe | Gln 90 | Arg | Gly | Leu | Arg | Ser 95 | Ser |
| Arg | Thr | Thr | Trp 100 | Leu | Arg | Lys | Leu | Arg 105 | Pro | Ala | Asn | Phe | Ser 110 | Leu | Thr |

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<213> homo sapiens

<400> 451

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| Phe 1 | Phe | Phe | Phe | Phe 5 | Val | Glu | Thr | Gly | Phe 10 | Arg | His | Val | Asp | Glu 15 | Thr |
| Gly | Leu | Glu | Leu 20 | Leu | Ala | Ser | Ser | Asp 25 | Leu | Pro | Pro | Gln | Leu 30 | Leu | Lys |
| Val | Leu | Gly 35 | Leu | Tyr | Arg | His | Glu 40 | Pro | Leu | Ser | Leu | Ala 45 | Leu | Lys | Arg |
| Phe | Ser 50 | Gln | Arg | Pro | Ser | Val 55 | Arg | | | | | | | | |

<210> 452
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<400> 452

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| Ile 1 | Arg | Phe | Gly | Ile 5 | Ser | Cys | Pro | Gly | Pro 10 | Gly | Ile | Ser | Leu | Gln 15 | Glu |
| Pro | Leu | Pro | Leu 20 | Cys | Trp | Arg | His | Ser 25 | Phe | Arg | Ile | Arg | Arg 30 | Arg | Arg |
| Glu | Lys | Arg 35 | Lys | Cys | Lys | Gly | Gly 40 | Arg | Ser | Phe | Pro | Gly 45 | Arg | Thr | Ile |
| Ser | Val 50 | Thr | His | Met | Asp | Pro 55 | Arg | | | | | | | | |

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<400> 453

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| Val 1 | Thr | Glu | Met | Val 5 | Arg | Pro | Gly | Lys | Asp 10 | Leu | Pro | Pro | Leu | His 15 | Phe |
| Leu | Phe | Ser | Leu 20 | Leu | Leu | Leu | Ile | Leu 25 | Lys | Leu | Cys | Leu | Gln 30 | Gln | Arg |
| Gly | Arg | Gly 35 | Ser | Cys | Arg | Glu | Ile 40 | Pro | Gly | Pro | Gly | Gln 45 | Glu | Met | Pro |
| Asn | Leu 50 | Ile | Tyr | Leu | Thr | Glu 55 | Gly | Leu | | | | | | | |

<210> 454
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<400> 454

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| Ile 1 | Leu | Ala | Phe | Trp 5 | Arg | Ala | Ala | Pro | Leu 10 | Trp | His | His | Gln | Thr 15 | Leu |
| Leu | Cys | Phe | Pro 20 | Ser | Thr | Trp | Asn | Ser 25 | Ser | Asn | Ile | Arg | Gly 30 | Cys | Glu |
| Gly | Leu | Ala 35 | Ile | Leu | Leu | Ser | Trp 40 | Val | His | Val | Ser | Asp 45 | Arg | Asn | Gly |
| Ala | Ala 50 | Trp | Glu | Arg | Ser | Pro 55 | Ser | Phe | Thr | Phe | Ser 60 | Leu | Leu | Pro | Pro |
| Pro 65 | Pro | Tyr | Ser | Lys | Thr 70 | Val | Pro | Pro | Thr | Glu 75 | Gly | Gln | Gly | Leu | Leu 80 |

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<400> 455

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| Ala 1 | Arg | Leu | Pro | Leu 5 | Leu | Ala | Ala | Glu | Asp 10 | Arg | Gly | Gln | Pro | Gly 15 | Ser |
| Val | Lys | Asp | Pro 20 | Lys | Met | Ala | Gly | Arg 25 | Lys | Leu | Ala | Leu | Lys 30 | Thr | Ile |
| Asp | Trp | Val 35 | Ala | Phe | Ala | Glu | Ile 40 | Ile | Pro | Gln | Asn | Gln 45 | Lys | Ala | Ile |
| Ala | Ser 50 | Ser | Leu | Lys | Ser | Trp 55 | Asn | Glu | Thr | Leu | Thr 60 | Ser | Arg | Leu | Ala |
| Ala 65 | Leu | Pro | Glu | Asn | Pro 70 | Pro | Ala | Ile | Asp | Trp 75 | Ala | Tyr | Tyr | Lys | Ala 80 |
| Asn | Val | Ala | Lys | Ala 85 | Gly | Leu | Val | Asp | Asp 90 | Phe | Glu | Lys | Lys | Phe 95 | Asn |
| Ala | Leu | Lys | Val 100 | Pro | Val | Pro | Glu | Asp 105 | Lys | Tyr | Thr | Ala | Gln 110 | Val | Asp |

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Glu | Glu | Lys | Glu | Asp | Val | Lys | Ser | Cys | Ala | Glu | Trp | Val | Ser | Leu |
| | | 115 | | | | | 120 | | | | | 125 | | | |
| Ser | Lys | Ala | Arg | Ile | Val | Glu | Tyr | Glu | Lys | Glu | Met | Glu | Lys | Met | Lys |
| | 130 | | | | | 135 | | | | | 140 | | | | |
| Asn | Leu | Ile | Pro | Phe | Asp | Gln | Met | Thr | Ile | Glu | Asp | Leu | Asn | Glu | Ala |
| 145 | | | | | 150 | | | | | 155 | | | | | 160 |
| Phe | Pro | Glu | Thr | Lys | Leu | Asp | Lys | Lys | Lys | Tyr | Pro | Tyr | Trp | Pro | His |
| | | | | 165 | | | | | 170 | | | | | 175 | |
| Gln | Pro | Ile | Glu | Asn | Leu | | | | | | | | | | |
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<210> 456
 <211> 76
 <212> PRT
 <213> homo sapiens

<400> 456

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| Ala | Gln | Ser | Ile | Ala | Gly | Gly | Phe | Ser | Gly | Lys | Ala | Ala | Asn | Leu | Glu |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Val | Arg | Val | Ser | Phe | Gln | Asp | Phe | Arg | Glu | Leu | Ala | Met | Ala | Phe | Trp |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Phe | Trp | Gly | Met | Ile | Ser | Ala | Lys | Ala | Thr | Gln | Ser | Met | Val | Phe | Arg |
| | | 35 | | | | | 40 | | | | | 45 | | | |
| Ala | Ser | Phe | Arg | Pro | Ala | Ile | Leu | Gly | Ser | Phe | Thr | Asp | Pro | Gly | Cys |
| | 50 | | | | | 55 | | | | | 60 | | | | |
| Pro | Arg | Ser | Ser | Ala | Ala | Ser | Asn | Gly | Ser | Arg | Ala | | | | |
| 65 | | | | | 70 | | | | | 75 | | | | | |

<210> 457
 <211> 104
 <212> PRT
 <213> homo sapiens

<400> 457

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Cys | Pro | Glu | Cys | Val | Ile | Gln | Gly | Pro | Glu | Leu | Pro | Pro | Gly | Leu | Asn |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Phe | Ile | Asn | Ser | Gln | Leu | Val | Gly | Glu | Ala | Asn | Arg | Asp | Thr | Phe | Ser |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Cys | Leu | Ile | Trp | Phe | Leu | Gly | Lys | Leu | His | Ser | Ser | Pro | Gln | Trp | Ser |
| | | 35 | | | | | 40 | | | | | 45 | | | |
| Ser | Asp | Gln | Met | Glu | Leu | Ser | Ser | Ser | Ser | Ser | Pro | Ser | Leu | Ser | His |
| | 50 | | | | | 55 | | | | | 60 | | | | |
| Ile | Leu | Gln | Ser | Trp | Pro | Leu | Arg | Glu | Thr | Pro | Thr | Gln | His | Lys | Ile |
| 65 | | | | | 70 | | | | | 75 | | | | | 80 |
| Ser | His | Leu | Leu | Phe | Leu | Arg | His | Pro | Pro | Gly | Gln | Tyr | Ile | Tyr | Pro |
| | | | | 85 | | | | | 90 | | | | | 95 | |
| Leu | Ala | Arg | Glu | Pro | Ser | Ala | His | | | | | | | | |

<210> 458
 <211> 223
 <212> PRT
 <213> homo sapiens

<400> 458

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|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Arg 1 | Gly | Ala | Gly | Gly 5 | His | Gln | Gly | Glu | Ser 10 | Gly | Arg | Pro | Glu | Gly 15 | Trp |
| Pro | Pro | Pro | Phe 20 | Leu | His | Pro | Arg | Gly 25 | Arg | Phe | Gln | Val | Pro 30 | Trp | Leu |
| Glu | Ser | Val 35 | Leu | Ile | Val | Val | Ser 40 | Asn | Asn | Ile | Asp | Glu 45 | Glu | Ala | Leu |
| Ala | Arg 50 | Leu | Ala | Gln | Glu | Gly 55 | Ser | Glu | Val | Asn | Val 60 | Ile | Gly | Ile | Gly |
| Thr 65 | Ser | Val | Val | Thr | Cys 70 | Pro | Gln | Gln | Pro | Ser 75 | Leu | Gly | Gly | Val | Tyr 80 |
| Lys | Leu | Val | Ala | Val 85 | Gly | Gly | Gln | Pro | Arg 90 | Met | Lys | Leu | Thr | Glu 95 | Asp |
| Pro | Glu | Lys | Gln 100 | Thr | Leu | Pro | Gly | Ser 105 | Lys | Ala | Ala | Phe | Arg 110 | Leu | Leu |
| Gly | Ser | Asp 115 | Gly | Ser | Pro | Leu | Met 120 | Asp | Met | Leu | Gln | Leu 125 | Ala | Glu | Glu |
| Pro | Val 130 | Pro | Gln | Ala | Gly | Gln 135 | Glu | Leu | Arg | Val | Trp 140 | Pro | Pro | Gly | Ala |
| Gln 145 | Glu | Pro | Cys | Thr | Val 150 | Arg | Pro | Ala | Gln | Val 155 | Glu | Pro | Leu | Leu | Arg 160 |
| Leu | Cys | Leu | Gln | Gln 165 | Gly | Gln | Leu | Cys | Glu 170 | Pro | Leu | Pro | Ser | Leu 175 | Ala |
| Glu | Ser | Arg | Ala 180 | Leu | Ala | Gln | Leu | Ser 185 | Leu | Ser | Arg | Leu | Ser 190 | Pro | Glu |
| His | Arg | Arg 195 | Leu | Arg | Ser | Pro | Ala 200 | Gln | Tyr | Gln | Val | Val 205 | Leu | Ser | Glu |
| Arg | Leu 210 | Gln | Ala | Leu | Val | Asn 215 | Ser | Leu | Cys | Ala | Gly 220 | Gln | Ser | Pro | |

<210> 459
 <211> 157
 <212> PRT
 <213> homo sapiens

<400> 459

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|----------|-----|-----|-----------|----------|-----|-----|-----|-----------|-----------|-----|-----|-----|-----------|-----------|-----|
| Val 1 | Ile | Arg | Val | Val 5 | Ser | Ser | Gln | Pro | Arg 10 | Ser | Glu | Ser | Gln | Gly 15 | Asp |
| Cys | Pro | Ala | His 20 | Arg | Leu | Phe | Thr | Arg 25 | Ala | Cys | Ser | Leu | Ser 30 | Asp | Ser |

| | | | | | | | | | | | | | | | |
|------------|------------|------------|------------|-----------|------------|------------|------------|------------|-----------|------------|------------|------------|------------|-----------|-----------|
| Thr | Thr | Trp 35 | Tyr | Cys | Ala | Gly | Leu 40 | Arg | Ser | Arg | Leu | Cys 45 | Ser | Gly | Leu |
| Ser | Arg 50 | Leu | Arg | Asp | Ser | Trp 55 | Ala | Lys | Ala | Leu | Asp 60 | Ser | Ala | Arg | Asp |
| Gly 65 | Ser | Gly | Ser | His | Ser 70 | Cys | Pro | Cys | Trp | Arg 75 | Gln | Ser | Arg | Ser | Ser 80 |
| Gly | Ser | Thr | Trp | Ala 85 | Gly | Leu | Thr | Val | Gln 90 | Gly | Ser | Trp | Ala | Pro 95 | Gly |
| Gly | His | Thr | Leu 100 | Ser | Ser | Cys | Pro | Ala 105 | Cys | Gly | Thr | Gly | Ser 110 | Ser | Ala |
| Asn | Cys | Ser 115 | Met | Ser | Met | Ser | Gly 120 | Asp | Pro | Ser | Glu | Pro 125 | Arg | Ser | Arg |
| Lys | Ala 130 | Ala | Leu | Leu | Pro | Gly 135 | Asn | Val | Cys | Phe | Ser 140 | Gly | Ser | Ser | Val |
| Ser 145 | Phe | Ile | Arg | Gly | Trp 150 | Pro | Pro | Thr | Ala | Thr 155 | Ser | Leu | | | |

<210> 460
 <211> 93
 <212> PRT
 <213> homo sapiens

<400> 460

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|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Pro 1 | Pro | Leu | Phe | Pro 5 | His | Leu | Leu | Phe | Leu 10 | Trp | Gly | Lys | Val | Ser 15 | Asp |
| Ser | Cys | Cys | Phe 20 | Gln | Ser | Ala | Pro | Leu 25 | Arg | Val | Ser | Gly | Gly 30 | Leu | Pro |
| Arg | Thr | Gln 35 | Thr | Val | His | Gln | Gly 40 | Leu | Gln | Pro | Leu | Gly 45 | Gln | His | His |
| Leu | Val 50 | Leu | Cys | Arg | Ala | Pro 55 | Gln | Pro | Pro | Val | Leu 60 | Arg | Ala | Glu | Ser |
| Ala 65 | Gln | Gly | Gln | Leu | Gly 70 | Gln | Gly | Ser | Arg | Leu 75 | Cys | Gln | Gly | Trp | Glu 80 |
| Arg | Leu | Thr | Gln | Leu 85 | Ser | Leu | Leu | Glu | Ala 90 | Glu | Pro | Gln | | | |

<210> 461
 <211> 328
 <212> PRT
 <213> homo sapiens

<400> 461

| | | | | | | | | | | | | | | | |
|----------|-----|-----|-----------|----------|-----|-----|-----|-----------|-----------|-----|-----|-----|-----------|-----------|-----|
| Phe 1 | Ser | Leu | Ile | Leu 5 | Cys | Lys | His | Ser | Ile 10 | Gly | Asp | Arg | Lys | Asn 15 | Tyr |
| Ala | Ser | Ala | Lys 20 | Leu | Ser | Glu | Leu | Leu 25 | Pro | Glu | Glu | Val | Glu 30 | Ala | Glu |

| | | | | | | | | | | | | | | | |
|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Val | Lys | Ala 35 | Ala | Ala | Glu | Ile | Ser 40 | Met | Gly | Thr | Glu | Val 45 | Ser | Glu | Glu |
| Asp | Ile 50 | Cys | Asn | Ile | Leu | His 55 | Leu | Cys | Thr | Gln | Val 60 | Ile | Glu | Ile | Ser |
| Glu 65 | Tyr | Arg | Thr | Gln | Leu 70 | Tyr | Glu | Tyr | Leu | Gln 75 | Asn | Arg | Met | Met | Ala 80 |
| Ile | Ala | Pro | Asn | Val 85 | Thr | Val | Met | Val | Gly 90 | Glu | Leu | Val | Gly | Ala 95 | Arg |
| Leu | Ile | Ala | His 100 | Ala | Gly | Ser | Leu | Leu 105 | Asn | Leu | Ala | Lys | His 110 | Ala | Ala |
| Ser | Thr | Val 115 | Gln | Ile | Leu | Gly | Ala 120 | Glu | Lys | Ala | Leu | Phe 125 | Arg | Ala | Leu |
| Lys | Ser 130 | Arg | Arg | Asp | Thr | Pro 135 | Lys | Tyr | Gly | Leu | Ile 140 | Tyr | His | Ala | Ser |
| Leu 145 | Val | Gly | Gln | Thr | Ser 150 | Pro | Lys | His | Lys | Gly 155 | Lys | Ile | Ser | Arg | Met 160 |
| Leu | Ala | Ala | Lys | Thr 165 | Val | Leu | Ala | Ile | Arg 170 | Tyr | Asp | Ala | Phe | Gly 175 | Glu |
| Asp | Ser | Ser | Ser 180 | Ala | Met | Gly | Val | Glu 185 | Asn | Arg | Ala | Lys | Leu 190 | Glu | Ala |
| Arg | Leu | Arg 195 | Thr | Leu | Glu | Asp | Arg 200 | Gly | Ile | Arg | Lys | Ile 205 | Ser | Gly | Thr |
| Gly | Lys 210 | Ala | Leu | Ala | Lys | Thr 215 | Glu | Lys | Tyr | Glu | His 220 | Lys | Ser | Glu | Val |
| Lys 225 | Thr | Tyr | Asp | Pro | Ser 230 | Gly | Asp | Ser | Thr | Leu 235 | Pro | Thr | Cys | Ser | Lys 240 |
| Lys | Arg | Lys | Ile | Glu 245 | Gln | Val | Asp | Lys | Glu 250 | Asp | Glu | Ile | Thr | Glu 255 | Lys |
| Lys | Ala | Lys | Lys 260 | Ala | Lys | Ile | Lys | Val 265 | Lys | Val | Glu | Glu | Glu 270 | Glu | Glu |
| Glu | Lys | Val 275 | Ala | Glu | Glu | Glu | Glu 280 | Thr | Ser | Val | Lys | Lys 285 | Lys | Lys | Lys |
| Arg | Gly 290 | Lys | Lys | Lys | His | Ile 295 | Lys | Glu | Glu | Pro | Leu 300 | Ser | Glu | Glu | Glu |
| Pro 305 | Cys | Thr | Ser | Thr | Ala 310 | Ile | Ala | Ser | Pro | Glu 315 | Lys | Lys | Lys | Lys | Lys 320 |
| Lys | Lys | Lys | Arg | Glu 325 | Asn | Glu | Asp | | | | | | | | |

<210> 462

<211> 124

<212> PRT

<213> homo sapiens

<400> 462

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|-----------|-----------|------------|------------|-----------|-----------|-----------|------------|------------|-----------|-----------|-----------|-----------|------------|-----------|-----------|
| Tyr 1 | Asn | Arg | Asn | Ser 5 | Phe | Leu | Leu | Ile | Leu 10 | Val | Leu | Ser | Leu | Phe 15 | Phe |
| Leu | Phe | Leu | Leu 20 | Phe | Leu | Trp | Thr | Ser 25 | Asn | Cys | Cys | Ala | Gly 30 | Thr | Trp |
| Phe | Phe | Leu 35 | Arg | Lys | Trp | Phe | Phe 40 | Leu | Asn | Val | Phe | Leu 45 | Phe | Thr | Pro |
| Phe | Leu 50 | Leu | Leu | Leu | His | Arg 55 | Cys | Phe | Phe | Phe | Phe 60 | Cys | His | Phe | Phe |
| Phe 65 | Phe | Leu | Phe | Phe | Asn 70 | Phe | Asn | Phe | Asn | Leu 75 | Gly | Phe | Phe | Gly | Phe 80 |
| Leu | Phe | Ser | Asn | Phe 85 | Ile | Leu | Phe | Ile | Tyr 90 | Leu | Phe | Tyr | Phe | Ala 95 | Phe |
| Phe | Arg | Thr | Gly 100 | Trp | Lys | Cys | Gly | Val 105 | Thr | Arg | Arg | Ile | Val 110 | Ser | Leu |
| His | Phe | Thr 115 | Phe | Val | Phe | Ile | Phe 120 | Phe | Cys | Phe | Cys | | | | |

<210> 463
 <211> 101
 <212> PRT
 <213> homo sapiens

<400> 463

| | | | | | | | | | | | | | | | |
|-----------|-----------|-----------|------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----|-----------|-----------|-----------|
| Ser 1 | Ser | Phe | Ser | Leu 5 | Phe | Phe | Phe | Phe | Phe 10 | Phe | Phe | Phe | Ser | Gly 15 | Leu |
| Ala | Ile | Ala | Val 20 | Leu | Val | His | Gly | Ser 25 | Ser | Ser | Glu | Ser | Gly 30 | Ser | Ser |
| Leu | Met | Cys 35 | Phe | Phe | Leu | Pro | Leu 40 | Phe | Phe | Phe | Phe 45 | Thr | Asp | Val | |
| Ser | Ser 50 | Ser | Ser | Ala | Thr | Phe 55 | Ser | Ser | Ser | Ser | Ser 60 | Ser | Thr | Leu | Thr |
| Leu 65 | Ile | Leu | Ala | Phe | Leu 70 | Ala | Phe | Phe | Ser | Val 75 | Ile | Ser | Ser | Ser | Leu 80 |
| Ser | Thr | Cys | Ser | Ile 85 | Leu | Arg | Phe | Leu | Glu 90 | Gln | Val | Gly | Ser | Val 95 | Glu |
| Ser | Pro | Glu | Gly 100 | Ser | | | | | | | | | | | |

<210> 464
 <211> 427
 <212> PRT
 <213> homo sapiens

<400> 464

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| Gly 1 | Gly | Ser | Ser | Arg 5 | Arg | His | Gly | Gly | Gly 10 | Tyr | Ala | Ala | Val | Ala 15 | Leu |
|----------|-----|-----|-----|----------|-----|-----|-----|-----|-----------|-----|-----|-----|-----|-----------|-----|

| | | | | | | | | | | | | | | | |
|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Leu | Val | Leu | Leu 20 | Leu | Leu | Gly | Pro | Gly 25 | Gly | Trp | Cys | Leu | Ala 30 | Glu | Pro |
| Pro | Arg | Asp 35 | Ser | Leu | Arg | Glu | Glu 40 | Leu | Val | Ile | Thr | Pro 45 | Leu | Pro | Ser |
| Gly | Asp 50 | Val | Ala | Ala | Thr | Phe 55 | Gln | Phe | Arg | Thr | Arg 60 | Trp | Asp | Ser | Glu |
| Leu 65 | Gln | Arg | Glu | Gly | Val 70 | Ser | His | Tyr | Arg | Leu 75 | Phe | Pro | Lys | Ala | Leu 80 |
| Gly | Gln | Leu | Ile | Ser 85 | Lys | Tyr | Ser | Leu | Arg 90 | Glu | Leu | His | Leu | Ser 95 | Phe |
| Thr | Gln | Gly | Phe 100 | Trp | Arg | Thr | Arg | Tyr 105 | Trp | Gly | Pro | Pro | Phe 110 | Leu | Gln |
| Ala | Pro | Ser 115 | Gly | Ala | Glu | Leu | Trp 120 | Val | Trp | Phe | Gln | Asp 125 | Thr | Val | Thr |
| Asp | Val 130 | Asp | Lys | Ser | Trp | Lys 135 | Glu | Leu | Ser | Asn | Val 140 | Leu | Ser | Gly | Ile |
| Phe 145 | Cys | Ala | Ser | Leu | Asn 150 | Phe | Ile | Asp | Ser | Thr 155 | Asn | Thr | Val | Thr | Pro 160 |
| Thr | Ala | Ser | Phe | Lys 165 | Pro | Leu | Gly | Leu | Ala 170 | Asn | Asp | Thr | Asp | His 175 | Tyr |
| Phe | Leu | Arg | Tyr 180 | Ala | Val | Leu | Pro | Arg 185 | Glu | Val | Val | Cys | Thr 190 | Glu | Asn |
| Leu | Thr | Pro 195 | Trp | Lys | Lys | Leu | Leu 200 | Pro | Cys | Ser | Ser | Lys 205 | Ala | Gly | Leu |
| Ser | Val 210 | Leu | Leu | Lys | Ala | Asp 215 | Arg | Leu | Phe | His | Thr 220 | Ser | Tyr | His | Ser |
| Gln 225 | Ala | Val | His | Ile | Arg 230 | Pro | Val | Cys | Arg | Asn 235 | Ala | Arg | Cys | Thr | Ser 240 |
| Ile | Ser | Trp | Glu | Leu 245 | Arg | Gln | Thr | Leu | Ser 250 | Val | Val | Phe | Asp | Ala 255 | Phe |
| Ile | Thr | Gly | Gln 260 | Gly | Lys | Lys | Asp | Trp 265 | Ser | Leu | Phe | Arg | Met 270 | Phe | Ser |
| Arg | Thr | Leu 275 | Thr | Glu | Pro | Cys | Pro 280 | Leu | Ala | Ser | Glu | Ser 285 | Arg | Val | Tyr |
| Val | Asp 290 | Ile | Thr | Thr | Tyr | Asn 295 | Gln | Asp | Asn | Glu | Thr 300 | Leu | Glu | Val | His |
| Pro 305 | Pro | Pro | Thr | Thr | Thr 310 | Tyr | Gln | Asp | Val | Ile 315 | Leu | Gly | Thr | Arg | Lys 320 |
| Thr | Tyr | Ala | Ile | Tyr 325 | Asp | Leu | Leu | Asp | Thr 330 | Ala | Met | Ile | Asn | Asn 335 | Ser |
| Arg | Asn | Leu | Asn 340 | Ile | Gln | Leu | Lys | Trp 345 | Lys | Arg | Pro | Pro | Glu 350 | Asn | Glu |

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Pro | Pro | Val | Pro | Phe | Leu | His | Ala | Gln | Arg | Tyr | Val | Ser | Gly | Tyr |
| | | 355 | | | | | 360 | | | | | 365 | | | |
| Gly | Leu | Gln | Lys | Gly | Glu | Leu | Ser | Thr | Leu | Leu | Tyr | Asn | Thr | His | Pro |
| | 370 | | | | | 375 | | | | | 380 | | | | |
| Tyr | Arg | Ala | Phe | Pro | Val | Leu | Leu | Leu | Asp | Thr | Val | Pro | Trp | Tyr | Leu |
| 385 | | | | | 390 | | | | | 395 | | | | | 400 |
| Arg | Leu | Leu | His | Pro | Leu | Pro | Ala | Cys | Pro | Gly | Pro | Ala | Ala | Thr | Pro |
| | | | | 405 | | | | | 410 | | | | | 415 | |
| Pro | Pro | Gly | Asp | Ala | Asp | Ser | Ala | Ala | Gly | Gln | | | | | |
| | | | 420 | | | | | 425 | | | | | | | |

<210> 465
 <211> 128
 <212> PRT
 <213> homo sapiens

<400> 465

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ser | Pro | Ser | Ile | Leu | Tyr | Gly | Ser | Cys | Thr | Cys | His | Ser | His | Lys | Ala |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Phe | Gly | Gly | Pro | Asp | Thr | Gly | Gly | His | Pro | Ser | Cys | Arg | Pro | His | Gln |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Val | Gln | Ser | Cys | Gly | Ser | Gly | Ser | Lys | Thr | Leu | Ser | Leu | Met | Trp | Ile |
| | | 35 | | | | | 40 | | | | | 45 | | | |
| Asn | Leu | Gly | Arg | Ser | Ser | Val | Met | Ser | Ser | Gln | Gly | Ser | Ser | Ala | Pro |
| | 50 | | | | | 55 | | | | | 60 | | | | |
| Leu | Ser | Thr | Ser | Ser | Thr | Pro | Pro | Thr | Gln | Ser | Leu | Pro | Leu | Pro | Pro |
| 65 | | | | | 70 | | | | | 75 | | | | | 80 |
| Ser | Asn | Pro | Trp | Val | Trp | Pro | Met | Thr | Leu | Thr | Thr | Thr | Phe | Cys | Ala |
| | | | | 85 | | | | | 90 | | | | | 95 | |
| Met | Leu | Cys | Cys | Arg | Gly | Arg | Trp | Ser | Ala | Pro | Lys | Thr | Ser | Pro | Pro |
| | | | 100 | | | | | 105 | | | | | 110 | | |
| Gly | Arg | Ser | Ser | Cys | Pro | Val | Val | Pro | Arg | Gln | Ala | Ser | Leu | Cys | Cys |
| | | 115 | | | | | 120 | | | | | 125 | | | |

<210> 466
 <211> 124
 <212> PRT
 <213> homo sapiens

<400> 466

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Pro | Gln | Ala | Trp | Arg | Arg | Leu | Cys | Arg | Cys | Cys | Ser | Ala | Arg | Pro | Val |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Ala | Pro | Gly | Ala | Arg | Arg | Leu | Val | Pro | Cys | Arg | Thr | Pro | Thr | Arg | Gln |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Pro | Ala | Gly | Gly | Thr | Cys | His | His | Pro | Ala | Ala | Phe | Arg | Gly | Arg | Ser |
| | | 35 | | | | | 40 | | | | | 45 | | | |
| Arg | His | Ile | Pro | Val | Pro | His | Ala | Leu | Gly | Phe | Gly | Ala | Ser | Ala | Gly |

| 50 | | | | | 55 | | | | | 60 | | | | | |
|-----------|-----|------------|------------|-----------|-----------|-----|------------|------------|-----------|-----------|-----|-----|------------|-----------|-----------|
| Arg 65 | Ser | Val | Pro | Leu | Gln 70 | Ala | Leu | Ser | Gln | Ser 75 | Pro | Gly | Ala | Ala | Asp 80 |
| Leu | Gln | Val | Phe | Ser 85 | Thr | Gly | Ala | Ala | Pro 90 | Val | Ile | His | Thr | Arg 95 | Leu |
| Leu | Glu | Asp | Pro 100 | Ile | Leu | Gly | Ala | Thr 105 | Leu | Pro | Ala | Gly | Pro 110 | Ile | Arg |
| Cys | Arg | Ala 115 | Val | Gly | Leu | Val | Pro 120 | Arg | His | Cys | His | | | | |

<210> 467
 <211> 106
 <212> PRT
 <213> homo sapiens

<400> 467

| | | | | | | | | | | | | | | | |
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| Phe 1 | Leu | His | Lys | Thr 5 | His | Asn | Arg | Ala | Val 10 | Glu | Glu | Ala | Lys | Glu 15 | Pro |
| Phe | Leu | Cys | Leu 20 | Cys | Ser | Arg | Thr | Glu 25 | Arg | Gly | Pro | Leu | Ala 30 | Ser | Val |
| Ser | Leu | Leu 35 | Val | Leu | Pro | Gly | Leu 40 | Tyr | Gln | Ala | Leu | Arg 45 | Arg | Gly | Met |
| Glu | Thr 50 | Pro | His | Ser | Gly | Ala 55 | Trp | Leu | Gly | Glu | Gly 60 | Glu | Ala | Ala | Gly |
| Val 65 | Leu | Trp | Ala | Ser | Arg 70 | Gly | Tyr | Asn | Leu | Ser 75 | Ser | Leu | Gly | Asn | Val 80 |
| Cys | Pro | Phe | Val | Gly 85 | Ser | Ser | Pro | Thr | Arg 90 | Arg | Gly | Thr | Gln | Leu 95 | Tyr |
| Thr | Gly | Thr | Ile 100 | Cys | Val | Trp | Ser | Val 105 | Leu | | | | | | |

<210> 468
 <211> 164
 <212> PRT
 <213> homo sapiens

<400> 468

| | | | | | | | | | | | | | | | |
|-----------|-----------|-----------|-----------|----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Ile 1 | Ser | Thr | Lys | Gln 5 | Thr | Thr | His | Arg | Leu 10 | Ser | Gln | Cys | Lys | Val 15 | Glu |
| Ser | Pro | Asp | Val 20 | Ser | Asp | Tyr | Cys | Leu 25 | Gln | Met | Asp | Thr | Arg 30 | Ser | Pro |
| Glu | Ser | Ser 35 | Asp | Tyr | Thr | Leu | Glu 40 | Lys | Pro | Lys | Glu | Pro 45 | Leu | Pro | Pro |
| Pro | Leu 50 | Pro | Gln | Ala | Arg | Pro 55 | Gln | Ser | Gly | Ala | Phe 60 | Pro | Tyr | Pro | Ala |
| Ser 65 | Arg | Pro | Gly | Thr | Val 70 | Arg | Glu | Glu | Pro | Ala 75 | Gly | Ser | Arg | Trp | Pro 80 |

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Gly | Leu | Ser | Gln | Ser | Tyr | Tyr | Arg | Gly | Ile | Lys | Arg | Ala | Pro | Leu |
| | | | | 85 | | | | | 90 | | | | | 95 | |
| Leu | Pro | Pro | Gln | Pro | Cys | Cys | Glu | Ser | Cys | Ala | Gly | Ile | Asn | Leu | Arg |
| | | | 100 | | | | | 105 | | | | | 110 | | |
| Asn | Ser | Pro | Glu | Ala | Glu | Thr | Gly | Leu | Met | Pro | Trp | Glu | Arg | Ser | Glu |
| | | 115 | | | | | 120 | | | | | 125 | | | |
| Cys | Glu | Pro | Met | Ala | Pro | Ser | Leu | Leu | Gly | Thr | Asn | Leu | Pro | Lys | Tyr |
| | 130 | | | | | 135 | | | | | 140 | | | | |
| Val | Lys | Ala | Glu | Gly | Asp | Arg | Asp | Leu | Ala | Glu | Gly | Arg | Lys | Ser | Phe |
| | 145 | | | | 150 | | | | | 155 | | | | | 160 |
| Ser | Ser | Arg | Asn | | | | | | | | | | | | |

<210> 469
 <211> 108
 <212> PRT
 <213> homo sapiens

<400> 469

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Ile | Arg | Gly | Arg | Pro | Pro | Leu | Phe | Met | Pro | Pro | Leu | Ser | Cys | Val |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Asp | Glu | Phe | Leu | Gln | Asn | Arg | Pro | His | Thr | Asp | Cys | Pro | Ser | Val | Lys |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Leu | Ser | Pro | Pro | Thr | Cys | Arg | Thr | Thr | Ala | Tyr | Lys | Trp | Thr | His | Val |
| | | 35 | | | | | 40 | | | | | 45 | | | |
| Pro | Gln | Arg | Ala | Gln | Ile | Ile | Pro | Ser | Arg | Ser | Pro | Lys | Asn | Pro | Cys |
| | 50 | | | | | 55 | | | | | 60 | | | | |
| Arg | Leu | Pro | Phe | Pro | Lys | Pro | Gly | Pro | Arg | Val | Gly | Arg | Phe | His | Thr |
| | 65 | | | | 70 | | | | | 75 | | | | | 80 |
| Pro | Pro | Gln | Gly | Leu | Val | Gln | Ser | Gly | Lys | Asn | Gln | Gln | Ala | His | Ala |
| | | | | 85 | | | | | 90 | | | | | 95 | |
| Gly | Gln | Arg | Ala | Ser | Leu | Ser | Pro | Thr | Thr | Glu | Ala | | | | |
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<210> 470
 <211> 317
 <212> PRT
 <213> homo sapiens

<400> 470

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Asn | Met | Val | Asp | Tyr | Tyr | Glu | Val | Leu | Gly | Val | Gln | Arg | His | Ala | Ser |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Pro | Glu | Asp | Ile | Lys | Lys | Ala | Tyr | Arg | Lys | Leu | Ala | Leu | Lys | Trp | His |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Pro | Asp | Lys | Asn | Pro | Glu | Asn | Lys | Glu | Glu | Ala | Glu | Arg | Lys | Phe | Lys |
| | | 35 | | | | | 40 | | | | | 45 | | | |
| Gln | Val | Ala | Glu | Ala | Tyr | Glu | Val | Leu | Ser | Asp | Ala | Lys | Lys | Arg | Asp |

| 50 | | | | | 55 | | | | | 60 | | | | | |
|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Ile 65 | Tyr | Asp | Lys | Tyr | Gly 70 | Lys | Glu | Gly | Leu | Asn 75 | Gly | Gly | Gly | Gly | Gly 80 |
| Gly | Ser | His | Phe | Asp 85 | Ser | Pro | Phe | Glu | Phe 90 | Gly | Phe | Thr | Phe | Arg 95 | Asn |
| Pro | Asp | Asp | Val 100 | Phe | Arg | Glu | Phe | Phe 105 | Gly | Gly | Arg | Asp | Pro 110 | Phe | Ser |
| Phe | Asp | Phe 115 | Phe | Glu | Asp | Pro | Phe 120 | Glu | Asp | Phe | Phe | Gly 125 | Asn | Arg | Arg |
| Gly | Pro 130 | Arg | Gly | Ser | Arg | Ser 135 | Arg | Gly | Thr | Gly | Ser 140 | Phe | Phe | Ser | Ala |
| Phe 145 | Ser | Gly | Phe | Pro | Ser 150 | Phe | Gly | Ser | Gly | Phe 155 | Ser | Ser | Phe | Asp | Thr 160 |
| Gly | Phe | Thr | Ser | Phe 165 | Gly | Ser | Leu | Gly | His 170 | Gly | Gly | Leu | Thr | Ser 175 | Phe |
| Ser | Ser | Thr | Ser 180 | Phe | Gly | Gly | Ser | Gly 185 | Met | Gly | Asn | Phe | Lys 190 | Ser | Ile |
| Ser | Thr | Ser 195 | Thr | Lys | Met | Val | Asn 200 | Gly | Arg | Lys | Ile | Thr 205 | Thr | Lys | Arg |
| Ile | Val 210 | Glu | Asn | Gly | Gln | Glu 215 | Arg | Val | Glu | Val | Glu 220 | Glu | Asp | Gly | Gln |
| Leu 225 | Lys | Ser | Leu | Thr | Ile 230 | Asn | Gly | Val | Ala | Asp 235 | Asp | Asp | Ala | Leu | Ala 240 |
| Glu | Glu | Arg | Met | Arg 245 | Arg | Gly | Gln | Asn | Ala 250 | Leu | Pro | Ala | Gln | Pro 255 | Ala |
| Gly | Leu | Arg | Pro 260 | Pro | Lys | Pro | Pro | Arg 265 | Pro | Ala | Ser | Leu | Leu 270 | Arg | His |
| Ala | Pro | His 275 | Cys | Leu | Ser | Glu | Glu 280 | Glu | Gly | Glu | Gln | Asp 285 | Arg | Pro | Gly |
| Ala | Pro 290 | Gly | Pro | Trp | Asp | Pro 295 | Leu | Gly | Val | Arg | Ser 300 | Arg | Ile | Glu | Arg |
| Arg 305 | Trp | Gln | Glu | Glu | Glu 310 | Ala | Glu | Ala | Glu | Arg 315 | Gly | Val | | | |

<210> 471
 <211> 123
 <212> PRT
 <213> homo sapiens

<400> 471

| | | | | | | | | | | | | | | | |
|----------|-----|-----|-----------|----------|-----|-----|-----|-----------|-----------|-----|-----|-----|-----------|-----------|-----|
| Ser 1 | Met | Pro | Leu | Val 5 | Gln | Leu | Pro | Ser | Ser 10 | Phe | Lys | Leu | Leu | Ser 15 | Leu |
| Leu | Leu | Leu | Leu 20 | Pro | Leu | Ala | Thr | Phe 25 | Phe | Gln | Ser | Cys | Cys 30 | Gly | Arg |

| | | | | | | | | | | | | | | | |
|-----------|-----------|------------|------------|-----------|-----------|-----------|------------|------------|-----------|-----------|-----------|-----------|------------|-----------|-----------|
| Arg | Gly | Gly 35 | Pro | Arg | Ala | Arg | Val 40 | Pro | Gln | Val | Gly | Pro 45 | Ala | Arg | Pro |
| Pro | Pro 50 | Gln | Arg | Asp | Ser | Glu 55 | Ala | Arg | Val | Ser | Ala 60 | Ala | Arg | Gln | Ala |
| Gly 65 | Ala | Ala | Ser | Ala | Gly 70 | Gly | Gly | Arg | Gln | Ala 75 | Gly | Leu | Ala | Gly | Arg 80 |
| Ser | Gly | Leu | Ser | Ala 85 | Cys | Ala | Pro | Gln | Arg 90 | Gly | His | Arg | Arg | Arg 95 | Pro |
| His | His | Leu | Leu 100 | Leu | Arg | Thr | Leu | Thr 105 | Gly | His | Leu | Leu | Gln 110 | Leu | Leu |
| Leu | Phe | Leu 115 | Asp | Arg | Ser | Arg | Gln 120 | Phe | Ser | Leu | | | | | |

<210> 472
 <211> 105
 <212> PRT
 <213> homo sapiens

<400> 472

| | | | | | | | | | | | | | | | |
|-----------|-----------|-----------|------------|-----------|-----------|-----------|-----------|------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Lys 1 | Ile | Arg | Ser | Asn 5 | Gln | Cys | Leu | Trp | Ser 10 | Asn | Phe | Leu | Pro | Pro 15 | Ser |
| Asn | Ser | Ser | Leu 20 | Cys | Phe | Cys | Phe | Phe 25 | Leu | Leu | Pro | Pro | Ser 30 | Phe | Asn |
| Pro | Ala | Ala 35 | Asp | Ala | Glu | Gly | Val 40 | Pro | Gly | Pro | Gly | Cys 45 | Pro | Arg | Ser |
| Val | Leu 50 | Leu | Ala | Leu | Leu | Leu 55 | Arg | Glu | Thr | Val | Arg 60 | Arg | Val | Ser | Gln |
| Gln 65 | Arg | Gly | Arg | Pro | Gly 70 | Arg | Leu | Arg | Arg | Ala 75 | Glu | Ala | Gly | Arg | Leu 80 |
| Gly | Trp | Gln | Gly | Val 85 | Leu | Ala | Ser | Pro | His 90 | Ala | Leu | Leu | Ser | Glu 95 | Gly |
| Ile | Val | Val | Gly 100 | His | Thr | Ile | Tyr | Cys 105 | | | | | | | |

<210> 473
 <211> 159
 <212> PRT
 <213> homo sapiens

<400> 473

| | | | | | | | | | | | | | | | |
|----------|-----|-----------|-----------|----------|-----|-----|-----------|-----------|-----------|-----|-----|-----------|-----------|-----------|-----|
| Ile 1 | Val | Ser | Glu | Arg 5 | Ser | Leu | Arg | Ser | Leu 10 | Trp | Thr | Ala | His | Trp 15 | Ala |
| Leu | Pro | Glu | Met 20 | Asp | Ser | Arg | Ile | Pro 25 | Tyr | Asp | Asp | Tyr | Pro 30 | Val | Val |
| Phe | Leu | Pro 35 | Ala | Tyr | Glu | Asn | Pro 40 | Pro | Ala | Trp | Ile | Pro 45 | Pro | His | Glu |
| Arg | Val | His | His | Pro | Asp | Tyr | Asn | Asn | Glu | Leu | Thr | Gln | Phe | Leu | Pro |

| 50 | | | | | 55 | | | | | 60 | | | | | |
|------------|------------|------------|------------|-----------|------------|------------|------------|------------|-----------|------------|------------|------------|------------|-----------|-----------|
| Arg 65 | Thr | Ile | Thr | Leu | Lys 70 | Lys | Pro | Pro | Gly | Ala 75 | Gln | Leu | Gly | Phe | Asn 80 |
| Ile | Arg | Gly | Gly | Lys 85 | Ala | Ser | Gln | Leu | Gly 90 | Ile | Phe | Ile | Ser | Lys 95 | Val |
| Ile | Pro | Asp | Ser 100 | Asp | Ala | His | Arg | Ala 105 | Gly | Leu | Gln | Glu | Gly 110 | Asp | Gln |
| Val | Leu | Ala 115 | Val | Asn | Asp | Val | Asp 120 | Phe | Gln | Asp | Ile | Glu 125 | His | Ser | Lys |
| Ala | Val 130 | Glu | Ile | Leu | Lys | Thr 135 | Ala | Arg | Glu | Ile | Ser 140 | Met | Arg | Val | Arg |
| Phe 145 | Phe | Pro | Tyr | Asn | Tyr 150 | His | Arg | Gln | Lys | Glu 155 | Arg | Thr | Val | His | |

<210> 474
 <211> 75
 <212> PRT
 <213> homo sapiens

| <400> 474 | | | | | | | | | | | | | | | |
|-----------|-----------|-----------|-----------|----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----|
| Pro 1 | Pro | Thr | Gly | Arg 5 | Pro | Pro | Pro | Phe | Phe 10 | Phe | Phe | Phe | Phe | Phe 15 | Phe |
| Phe | Ser | Ile | Val 20 | Phe | Tyr | Phe | Leu | Gly 25 | Glu | Arg | Leu | Gly | Gly 30 | Gly | Arg |
| Gly | Glu | Asn 35 | Ser | Val | Ser | Leu | Glu 40 | Ser | Gln | Lys | Cys | Met 45 | Asn | Leu | Leu |
| Val | Val 50 | Gln | Gly | Trp | Asp | Lys 55 | Met | Ala | Arg | Glu | Val 60 | Arg | Trp | Lys | Ile |
| Pro 65 | Lys | Ile | Leu | Phe | Ala 70 | Thr | Asp | Phe | Tyr | Asn 75 | | | | | |

<210> 475
 <211> 97
 <212> PRT
 <213> homo sapiens

| <400> 475 | | | | | | | | | | | | | | | |
|-----------|-----------|-----------|-----------|----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Leu 1 | Gly | Gly | Leu | Ser 5 | Ser | Ser | Asp | Val | Lys 10 | Ser | Gln | Leu | Ser | Ser 15 | Arg |
| Arg | Leu | Leu | Gln 20 | Cys | Asp | Gly | Ser | Gly 25 | Gln | Lys | Leu | Gly | Gln 30 | Leu | Ile |
| Val | Val | Val 35 | Arg | Val | Val | Tyr | Pro 40 | Leu | Met | Arg | Arg | Asn 45 | Pro | Cys | Trp |
| Arg | Ile 50 | Leu | Ile | Gly | Arg | Gln 55 | Glu | Asn | His | Arg | Val 60 | Val | Ile | Ile | Arg |
| Asn 65 | Pro | Ala | Val | His | Leu 70 | Gly | Gln | Gly | Pro | Val 75 | Gly | Ser | Pro | Gln | Arg 80 |

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----------|-----|-----|-----|-----|-----------|-----|-----|-----|-----|-----------|-----|
| Pro | Gln | Thr | Pro | Leu 85 | Thr | Asp | Asn | Ser | Val 90 | Trp | Glu | Pro | Glu | Ala 95 | Asp |
|-----|-----|-----|-----|-----------|-----|-----|-----|-----|-----------|-----|-----|-----|-----|-----------|-----|

Ala

<210> 476

<211> 274

<212> PRT

<213> homo sapiens

<400> 476

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|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Gly 1 | His | Leu | Trp | Arg 5 | Pro | Ala | Gly | Gly | Arg 10 | Leu | Pro | Arg | His | His 15 | Asp |
| Gln | Val | Cys | Arg 20 | Ala | Ala | Glu | Pro | His 25 | Arg | Gly | Gly | Gly | Leu 30 | Cys | Gly |
| His | Gln | Arg 35 | Arg | Leu | Pro | His | Arg 40 | Pro | Arg | Val | Gln | Glu 45 | Gly | Trp | Gly |
| Leu | Cys 50 | Pro | His | Glu | Ser | Leu 55 | His | Gln | Val | Pro | Ala 60 | Asp | Arg | Pro | Trp |
| His 65 | Glu | Pro | Gly | Ala | Gly 70 | Cys | Ala | Ala | Asp | Cys 75 | Glu | Asp | Pro | His | Arg 80 |
| Arg | Pro | Gly | Ala | Cys 85 | Glu | Pro | Gly | Ala | Pro 90 | Pro | Ala | Ala | Arg | Ala 95 | Ala |
| Gly | Leu | Gly | Arg 100 | Gly | Thr | Arg | His | Gly 105 | Asn | Gly | Asp | Ile | Leu 110 | Ser | Phe |
| Glu | Asp | Ala 115 | Asn | Arg | Ala | Met | Gln 120 | Thr | Gly | Val | Thr | Gly 125 | Ile | Met | Ile |
| Ala | Arg 130 | Gly | Ala | Leu | Leu | Lys 135 | Pro | Trp | Leu | Phe | Thr 140 | Glu | Ile | Lys | Glu |
| Gln 145 | Arg | His | Trp | Asp | Ile 150 | Ser | Ser | Ser | Glu | Arg 155 | Leu | Asp | Ile | Leu | Arg 160 |
| Asp | Phe | Thr | Asn | Tyr 165 | Gly | Leu | Glu | His | Trp 170 | Gly | Ser | Asp | Thr | Gln 175 | Gly |
| Val | Glu | Lys | Thr 180 | Arg | Arg | Phe | Leu | Leu 185 | Glu | Trp | Leu | Ser | Phe 190 | Leu | Cys |
| Arg | Tyr | Asp 195 | Pro | Val | Gly | Leu | Leu 200 | Glu | Arg | Leu | Pro | Gln 205 | Arg | Ile | Asn |
| Glu | Arg 210 | Pro | Pro | Tyr | Tyr | Leu 215 | Gly | Arg | Asp | Tyr | Leu 220 | Glu | Thr | Leu | Met |
| Ala 225 | Ser | Gln | Lys | Ala | Ala 230 | Asp | Trp | Ile | Arg | Ile 235 | Ser | Glu | Met | Leu | Leu 240 |
| Gly | Pro | Val | Pro | Pro 245 | Thr | Ser | Pro | Ser | Cys 250 | Arg | Ser | Thr | Arg | Pro 255 | Thr |
| Arg | Thr | Ser | Ser 260 | Leu | Arg | Leu | Ser | Gln 265 | Gly | His | Pro | Gly | Ala 270 | Arg | Arg |

Val Gln

<210> 477

<211> 256

<212> PRT

<213> homo sapiens

<400> 477

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|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Ala 1 | Gly | Pro | Ala | Pro 5 | Val | Gln | Pro | Gly | Pro 10 | His | Thr | Arg | Cys | Arg 15 | Cys |
| Pro | Arg | Gly | His 20 | Gly | Ser | Arg | Gly | Arg 25 | Ser | Gln | Ala | Gly | Lys 30 | Leu | Trp |
| Cys | Pro | Ala 35 | Gly | Pro | Arg | Arg | Pro 40 | Gly | Thr | Ser | Thr | Pro 45 | Pro | Ser | Ser |
| Pro | Val 50 | Arg | Thr | Cys | Gly | Pro 55 | Leu | Thr | Asp | Glu | Asp 60 | Val | Val | Arg | Leu |
| Arg 65 | Pro | Cys | Glu | Lys | Lys 70 | Arg | Leu | Asp | Ile | Arg 75 | Gly | Lys | Leu | Tyr | Leu 80 |
| Ala | Pro | Leu | Thr | Thr 85 | Cys | Gly | Asn | Leu | Pro 90 | Phe | Arg | Arg | Ile | Cys 95 | Lys |
| Arg | Phe | Gly | Ala 100 | Asp | Val | Thr | Cys | Gly 105 | Glu | Met | Ala | Val | Cys 110 | Thr | Asn |
| Leu | Leu | Gln 115 | Gly | Gln | Met | Ser | Glu 120 | Trp | Ala | Leu | Leu | Lys 125 | Arg | His | Gln |
| Cys | Glu 130 | Asp | Ile | Phe | Gly | Val 135 | Gln | Leu | Glu | Gly | Ala 140 | Phe | Pro | Asp | Thr |
| Met 145 | Thr | Lys | Cys | Ala | Glu 150 | Leu | Leu | Ser | Arg | Thr 155 | Val | Glu | Val | Asp | Phe 160 |
| Val | Asp | Ile | Asn | Val 165 | Gly | Cys | Pro | Ile | Asp 170 | Leu | Val | Tyr | Lys | Lys 175 | Gly |
| Gly | Gly | Cys | Ala 180 | Leu | Met | Asn | Arg | Ser 185 | Thr | Lys | Phe | Gln | Gln 190 | Ile | Val |
| Arg | Gly | Met 195 | Asn | Gln | Val | Leu | Asp 200 | Val | Pro | Leu | Thr | Val 205 | Lys | Ile | Arg |
| Thr | Gly 210 | Val | Gln | Glu | Arg | Val 215 | Asn | Leu | Ala | His | Arg 220 | Leu | Leu | Pro | Glu |
| Leu 225 | Arg | Asp | Trp | Gly | Val 230 | Ala | Leu | Val | Thr | Glu 235 | Met | Gly | Thr | Ser | Cys 240 |
| His | Leu | Arg | Met | Pro 245 | Thr | Ala | Pro | Cys | Arg 250 | Leu | Val | Ser | Pro | Gly 255 | Ser |

<210> 478

<211> 165

<212> PRT

<213> homo sapiens

<400> 478

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|------------|------------|------------|------------|------------|------------|------------|------------|------------|-----------|------------|------------|------------|------------|-----------|------------|
| Asn 1 | Leu | Leu | Tyr | Ser 5 | Pro | Arg | Pro | Arg | Val 10 | Pro | Leu | Gly | Lys | Pro 15 | Glu |
| Ala | Thr | Cys | Thr 20 | Arg | Trp | Pro | Cys | Ala 25 | Ser | Ala | Arg | Arg | Arg 30 | Gly | Gly |
| Gly | His | Trp 35 | Pro | Lys | Glu | His | Leu 40 | Ala | Asp | Ala | Asp | Pro 45 | Val | Gly | Cys |
| Leu | Leu 50 | Ala | Gly | His | Gln | Arg 55 | Leu | Gln | Val | Val | Ala 60 | Ala | Gln | Val | Val |
| Gly 65 | Arg | Pro | Leu | Val | Asp 70 | Pro | Leu | Trp | Glu | Pro 75 | Leu | Gln | Gln | Pro | His 80 |
| Gly | Ile | Val | Pro | Ala 85 | Gln | Glu | Gly | Gln | Pro 90 | Leu | Glu | Gln | Lys | Ala 95 | Pro |
| Gly | Leu | Leu | His 100 | Ala | Leu | Arg | Val | Arg 105 | Ala | Pro | Val | Leu | Gln 110 | Ala | Val |
| Val | Gly | Glu 115 | Val | Pro | Gln | Asp | Val 120 | Gln | Ala | Leu | Gly | Arg 125 | Arg | Asp | Val |
| Pro | Val 130 | Pro | Leu | Leu | Leu | Asp 135 | Leu | Arg | Glu | Glu | Pro 140 | Arg | Leu | Glu | Gln |
| Gly 145 | Ala | Thr | Gly | Asn | His 150 | Asp | Pro | Gly | Asp | Thr 155 | Ser | Leu | His | Gly | Ala 160 |
| Val | Gly | Ile | Leu | Lys 165 | | | | | | | | | | | |

<210> 479

<211> 262

<212> PRT

<213> homo sapiens

<400> 479

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|-----------|-----|-----------|------------|-----------|-----------|-----------|-----------|------------|-----------|-----------|-----------|-----------|------------|-----------|-----------|
| Gly 1 | Ser | Pro | Met | Ser 5 | Pro | Ala | Arg | Ala | Met 10 | Gln | Thr | Leu | Phe | Val 15 | Pro |
| Glu | His | Gly | Asp 20 | His | Gly | Ala | Gly | Val 25 | Cys | Ser | Asp | His | His 30 | His | Arg |
| Gly | Gly | His 35 | Val | Pro | Ala | Glu | Pro 40 | Leu | Gln | Ala | Val | Cys 45 | Thr | Val | Leu |
| His 50 | Gln | Pro | Ala | Gln | Pro | Gly 55 | Ala | Glu | Glu | Arg | Arg 60 | Cys | Pro | Val | Leu |
| Arg 65 | Arg | Met | Pro | Val | Ala 70 | Ser | Glu | Thr | Gln | Cys 75 | Gln | Ala | Thr | Glu | Ser 80 |
| Gln | Ser | Arg | Ser | Leu 85 | Thr | Pro | Arg | Leu | Gly 90 | Pro | Pro | Thr | Ala | Trp 95 | Pro |
| Cys | Ala | Leu | Arg 100 | Pro | Ala | Glu | Arg | Phe 105 | Pro | Pro | Leu | Pro | Ala 110 | Gln | Cys |

| | | | | | | | | | | | | | | | |
|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Leu | Leu | His 115 | Val | Gln | Leu | Gln | Thr 120 | Leu | Phe | Val | Pro | Glu 125 | His | Gly | Asp |
| His | Gly 130 | Ala | Gly | Val | Cys | Ser 135 | Asp | His | His | His | Arg 140 | Gly | Gly | His | Val |
| Pro 145 | Ala | Glu | Pro | Leu | Gln 150 | Ala | Val | Cys | Thr | Val 155 | Leu | His | Gln | Pro | Ala 160 |
| Gln | Pro | Gly | Ala | Glu 165 | Glu | Arg | Arg | Cys | Pro 170 | Val | Leu | Arg | Arg | Met 175 | Pro |
| Val | Ala | Leu | Gly 180 | Glu | His | Ser | Val | Arg 185 | Gln | Arg | Asn | Pro | Arg 190 | Ala | Ala |
| Gly | Leu | Arg 195 | Pro | Ala | Ser | Ala | His 200 | Arg | Pro | Pro | Gly | Arg 205 | Ala | Ala | Leu |
| Arg | Pro 210 | Ala | Gly | Ala | Leu | Pro 215 | Pro | Leu | Pro | Ala | His 220 | Leu | Ser | Val | Pro |
| Ala 225 | Ala | Arg | Asp | Arg | Pro 230 | Ala | Ala | His | His | Leu 235 | Ala | Val | Arg | Arg | Gly 240 |
| Gly | Ala | Pro | Thr | Leu 245 | Pro | Gly | Pro | Leu | Asp 250 | Leu | Gln | Gly | Ser | Gly 255 | Pro |
| Arg | Gly | Gly | Val 260 | Gly | Asn | | | | | | | | | | |

<210> 480

<211> 270

<212> PRT

<213> homo sapiens

<400> 480

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|-----------|------------|------------|------------|-----------|-----------|------------|------------|------------|-----------|-----------|------------|------------|------------|-----------|-----------|
| Ala 1 | Ala | Gln | Cys | Leu 5 | Leu | His | Val | Gln | Cys 10 | Lys | Arg | Ser | Leu | Phe 15 | Gln |
| Ser | Met | Glu | Ile 20 | Thr | Glu | Leu | Glu | Phe 25 | Val | Gln | Ile | Ile | Ile 30 | Ile | Val |
| Val | Val | Thr 35 | Cys | Leu | Leu | Ser | His 40 | Tyr | Lys | Leu | Ser | Ala 45 | Arg | Ser | Phe |
| Ile | Ser 50 | Arg | His | Ser | Gln | Gly 55 | Arg | Arg | Arg | Glu | Asp 60 | Ala | Leu | Ser | Ser |
| Glu 65 | Gly | Cys | Leu | Trp | Pro 70 | Arg | Arg | His | Ser | Val 75 | Arg | Gln | Arg | Asn | Pro 80 |
| Arg | Ala | Ala | Val | Leu 85 | Arg | Pro | Ala | Ser | Ala 90 | His | Arg | Pro | Pro | Gly 95 | Arg |
| Ala | Pro | Phe | Ala 100 | Gln | Arg | Ser | Val | Phe 105 | His | Arg | Cys | Gln | Pro 110 | Asn | Val |
| Ser | Cys | Thr 115 | Cys | Asn | Cys | Lys | Arg 120 | Ser | Leu | Phe | Gln | Ser 125 | Met | Glu | Ile |
| Thr | Glu 130 | Leu | Glu | Phe | Val | Gln 135 | Ile | Ile | Ile | Ile | Val 140 | Val | Val | Thr | Cys |

| | | | | | | | | | | | | | | | |
|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Leu 145 | Leu | Ser | His | Tyr | Lys 150 | Leu | Ser | Ala | Arg | Ser 155 | Phe | Ile | Ser | Arg | His 160 |
| Ser | Gln | Gly | Arg | Arg 165 | Arg | Glu | Asp | Ala | Leu 170 | Ser | Ser | Glu | Gly | Cys 175 | Leu |
| Trp | Pro | Ser | Glu 180 | Ser | Thr | Val | Ser | Gly 185 | Asn | Gly | Ile | Pro | Glu 190 | Pro | Gln |
| Val | Tyr | Ala 195 | Pro | Pro | Arg | Pro | Thr 200 | Asp | Arg | Leu | Ala | Val 205 | Pro | Pro | Phe |
| Ala | Gln 210 | Arg | Glu | Arg | Phe | His 215 | Arg | Phe | Gln | Pro | Thr 220 | Tyr | Pro | Tyr | Leu |
| Gln 225 | His | Glu | Ile | Asp | Leu 230 | Pro | Pro | Thr | Ile | Ser 235 | Leu | Ser | Asp | Gly | Glu 240 |
| Glu | Pro | Pro | Pro | Tyr 245 | Gln | Gly | Pro | Trp | Thr 250 | Phe | Lys | Val | Arg | Asp 255 | Pro |
| Glu | Glu | Glu | Leu 260 | Glu | Ile | Glu | Arg | Gly 265 | Leu | Gly | Ala | Glu | Thr 270 | | |

<210> 481
 <211> 124
 <212> PRT
 <213> homo sapiens

<400> 481

| | | | | | | | | | | | | | | | |
|-----------|-----------|------------|------------|-----------|-----------|-----------|------------|------------|-----------|-----------|-----------|-----------|------------|-----------|-----------|
| Ala 1 | Thr | Thr | Ser | Cys 5 | Leu | His | Gly | Pro | Ser 10 | Ser | Ala | Gly | Thr | Ala 15 | Arg |
| Gly | Gly | Gly | Glu 20 | Lys | Met | Pro | Cys | Pro 25 | Gln | Lys | Asp | Ala | Cys 30 | Gly | Pro |
| Arg | Arg | Ala 35 | Gln | Cys | Gln | Ala | Thr 40 | Glu | Ser | Gln | Ser | Arg 45 | Arg | Ser | Thr |
| Pro | Arg 50 | Leu | Gly | Pro | Pro | Thr 55 | Ala | Trp | Pro | Cys | Arg 60 | Pro | Ser | Pro | Ser |
| Gly 65 | Ser | Ala | Ser | Thr | Ala 70 | Ser | Ser | Pro | Pro | Ile 75 | Arg | Thr | Cys | Ser | Thr 80 |
| Arg | Ser | Thr | Cys | Arg 85 | Pro | Pro | Ser | Arg | Cys 90 | Gln | Thr | Gly | Arg | Ser 95 | Pro |
| His | Pro | Thr | Arg 100 | Ala | Pro | Gly | Pro | Ser 105 | Arg | Phe | Gly | Thr | Pro 110 | Arg | Arg |
| Ser | Trp | Lys 115 | Leu | Asn | Gly | Asp | Trp 120 | Val | Arg | Arg | Pro | | | | |

<210> 482
 <211> 99
 <212> PRT
 <213> homo sapiens

<400> 482

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|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Arg 1 | Val | Leu | Val | Ser 5 | Pro | Leu | Ser | Leu | Ser 10 | Met | Trp | Arg | Trp | Lys 15 | Val |
| Glu | Lys | Asp | Thr 20 | Val | Ser | Ile | Leu | Lys 25 | Leu | Leu | Arg | Phe | Ser 30 | Glu | Arg |
| Gly | Arg | His 35 | Leu | Asn | Arg | Gln | Val 40 | Gly | Phe | Ser | Val | Leu 45 | Ser | Ala | Leu |
| Gly | Ile 50 | Trp | Arg | Glu | Met | Gly 55 | Leu | Leu | Ser | Leu | Cys 60 | Thr | Gln | Glu | Gly |
| His 65 | Ala | Leu | Lys | Thr | Val 70 | Phe | Val | Asp | Gln | Arg 75 | Arg | Leu | Tyr | Ser | Thr 80 |
| Gly | Gly | Ile | Gln | Met 85 | Ser | Leu | Arg | Gly | Arg 90 | Glu | Glu | Thr | Trp | Gln 95 | Ala |
| Asp | Tyr | Ile | | | | | | | | | | | | | |

<210> 483
 <211> 104
 <212> PRT
 <213> homo sapiens

<400> 483

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|-----------|-----------|-----------|------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Val 1 | Leu | Glu | Glu | Glu 5 | Lys | Lys | His | Gly | Lys 10 | Gln | Ile | Thr | Ser | Glu 15 | Pro |
| Phe | Glu | Leu | Cys 20 | Phe | Ser | Phe | Phe | Pro 25 | Cys | Leu | Phe | Ser | Lys 30 | Ile | Tyr |
| Leu | Asn | Leu 35 | Glu | Thr | Gln | Asp | Ile 40 | Phe | Leu | Gly | Asn | Leu 45 | Leu | Pro | Met |
| Ser | Glu 50 | Val | Ala | Ser | Ala | Ala 55 | Ser | Arg | Gln | Ile | Pro 60 | Gly | Asn | Pro | Glu |
| Pro 65 | Gln | Asn | Val | Ile | Pro 70 | Pro | Gly | Ser | Ala | Trp 75 | Pro | Asp | Pro | Val | Leu 80 |
| Ser | Ala | Gly | Phe | Thr 85 | Tyr | Gln | Ser | His | Ser 90 | Ser | Phe | Ser | Ile | Asn 95 | Thr |
| Pro | Lys | Ser | Ser 100 | Pro | Asn | His | His | | | | | | | | |

<210> 484
 <211> 123
 <212> PRT
 <213> homo sapiens

<400> 484

| | | | | | | | | | | | | | | | |
|----------|-----|-----------|-----------|----------|-----|-----|-----------|-----------|-----------|-----|-----|-----------|-----------|-----------|-----|
| Lys 1 | Leu | Asp | Ser | Thr 5 | Gln | Cys | Arg | Pro | Ser 10 | Leu | His | Thr | Asn | Met 15 | Tyr |
| Val | Leu | Leu | Ser 20 | Glu | Cys | His | Leu | Leu 25 | Cys | Thr | Gln | Cys | His 30 | Asp | Ser |
| Lys | Ile | Lys 35 | Ile | Ser | Val | Ser | Asn 40 | Gln | Asn | Ile | Asn | Gln 45 | Ala | Arg | Asn |

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ser | Trp | Ala | Gln | Arg | Gly | Val | Arg | Gly | Leu | Ser | Tyr | Thr | Ala | Val | Lys |
| | 50 | | | | | 55 | | | | | 60 | | | | |
| Gln | Pro | Thr | Cys | Ser | Ala | His | Ser | Gln | Ala | Glu | Ser | Asp | Trp | Ser | Cys |
| 65 | | | | | 70 | | | | | 75 | | | | | 80 |
| Arg | Gln | Arg | Gly | Gly | Gly | Arg | Val | Leu | Cys | Cys | Pro | Leu | Leu | Cys | Met |
| | | | | 85 | | | | | 90 | | | | | 95 | |
| Val | Ser | Trp | Val | Phe | Gln | Gly | Gly | Gln | Leu | Leu | Ser | Pro | Asn | Lys | Thr |
| | | | 100 | | | | | 105 | | | | | 110 | | |
| Val | Asn | Ser | Leu | Arg | Thr | Gly | Pro | Leu | Pro | His | | | | | |
| | | 115 | | | | | 120 | | | | | | | | |

<210> 485
 <211> 303
 <212> PRT
 <213> homo sapiens

<400> 485

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|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Gly | Arg | Lys | Pro | Ser | Trp | Val | Gly | Gly | Ala | Gly | Leu | Glu | Pro | Ser |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Gln | Gly | Ser | Gly | Leu | Ser | His | His | Pro | Ala | Pro | Gln | Ser | Asp | Ser | Ala |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Pro | Thr | Ser | Pro | Pro | Ile | Pro | Gly | Glu | Pro | Gly | Pro | Gln | Arg | Glu | Val |
| | | 35 | | | | | 40 | | | | | 45 | | | |
| Asp | Lys | Trp | Gly | Gly | Ser | Leu | Gly | Arg | Pro | Glu | Ser | Ser | Gly | His | Pro |
| | 50 | | | | | 55 | | | | | 60 | | | | |
| Gly | Arg | Thr | Pro | Ala | Thr | Cys | Cys | His | Cys | Ala | Ala | Val | Met | Ala | Arg |
| 65 | | | | | 70 | | | | | 75 | | | | | 80 |
| Ser | Gly | Ser | Ala | Thr | Pro | Pro | Ala | Arg | Ala | Pro | Gly | Ala | Pro | Pro | Arg |
| | | | | 85 | | | | | 90 | | | | | 95 | |
| Ser | Pro | Pro | Gln | Arg | Leu | Val | Gln | Asp | Val | Ser | Gly | Pro | Leu | Arg | Glu |
| | | | 100 | | | | | 105 | | | | | 110 | | |
| Leu | Arg | Pro | Arg | Leu | Cys | His | Leu | Arg | Lys | Gly | Pro | Gln | Gly | Tyr | Gly |
| | | 115 | | | | | 120 | | | | | 125 | | | |
| Phe | Asn | Leu | His | Ser | Asp | Lys | Ser | Arg | Pro | Gly | Gln | Tyr | Ile | Arg | Ser |
| | 130 | | | | | 135 | | | | | 140 | | | | |
| Val | Asp | Pro | Gly | Ser | Pro | Ala | Ala | Arg | Ser | Gly | Leu | Arg | Ala | Gln | Asp |
| 145 | | | | | 150 | | | | | 155 | | | | | 160 |
| Arg | Leu | Ile | Glu | Val | Asn | Gly | Gln | Asn | Val | Glu | Gly | Leu | Arg | His | Ala |
| | | | | 165 | | | | | 170 | | | | | 175 | |
| Glu | Val | Val | Ala | Ser | Ile | Lys | Ala | Arg | Glu | Asp | Glu | Ala | Arg | Leu | Leu |
| | | | 180 | | | | | 185 | | | | | 190 | | |
| Val | Val | Asp | Pro | Glu | Thr | Asp | Glu | His | Phe | Lys | Arg | Leu | Arg | Val | Thr |
| | | 195 | | | | | 200 | | | | | 205 | | | |
| Pro | Thr | Glu | Glu | His | Val | Glu | Gly | Pro | Leu | Pro | Ser | Pro | Val | Thr | Asn |

| 210 | | | | | 215 | | | | | 220 | | | | | |
|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Gly 225 | Thr | Ser | Pro | Ala | Gln 230 | Leu | Asn | Gly | Gly | Ser 235 | Ala | Cys | Ser | Ser | Arg 240 |
| Ser | Asp | Leu | Pro | Gly 245 | Ser | Asp | Lys | Asp | Thr 250 | Glu | Asp | Gly | Ser | Ala 255 | Trp |
| Lys | Gln | Asp | Pro 260 | Phe | Gln | Glu | Ser | Gly 265 | Leu | His | Leu | Ser | Pro 270 | Thr | Ala |
| Ala | Glu | Ala 275 | Lys | Glu | Lys | Ala | Arg 280 | Ala | Met | Arg | Val | Asn 285 | Lys | Arg | Ala |
| Pro | Gln 290 | Met | Asp | Trp | Asn | Arg 295 | Lys | Arg | Glu | Ile | Phe 300 | Ser | Asn | Phe | |

<210> 486

<211> 149

<212> PRT

<213> homo sapiens

<400> 486

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|------------|------------|------------|------------|-----------|-----------|------------|------------|------------|-----------|-----------|------------|------------|------------|-----------|-----------|
| Ala 1 | Pro | Arg | Arg | Pro 5 | Arg | Pro | Arg | Arg | Arg 10 | Leu | Glu | Pro | Cys | Glu 15 | Ser |
| Thr | Ser | Ala | Arg 20 | His | Arg | Trp | Thr | Gly 25 | Thr | Gly | Ser | Val | Lys 30 | Ser | Ser |
| Ala | Thr | Ser 35 | Glu | Pro | Leu | Pro | Ala 40 | Cys | Leu | Gly | Thr | Leu 45 | Gly | Pro | Leu |
| Pro | His 50 | Gly | Pro | Trp | Ala | Ser 55 | Ala | Cys | Pro | Glu | Leu 60 | Pro | Gln | Pro | Gln |
| Trp 65 | Thr | Gly | Gly | Trp | Ser 70 | Cys | His | Cys | Pro | Glu 75 | Ile | Ser | Pro | Ser | Pro 80 |
| Gly | Glu | Pro | Pro | Ser 85 | Cys | Pro | Cys | Pro | Pro 90 | Gly | Thr | Gly | Gly | Leu 95 | Trp |
| Gln | Gln | Asp | Arg 100 | Gly | Arg | Glu | Thr | Gln 105 | Arg | Cys | Glu | Arg | Glu 110 | Ser | Glu |
| Thr | Glu | Thr 115 | Glu | Arg | Glu | Arg | Glu 120 | Arg | His | Arg | Glu | Arg 125 | Gln | Arg | Glu |
| Ser | Glu 130 | Arg | Ala | Arg | Gly | Ser 135 | Arg | Gly | Ala | Arg | Ala 140 | Phe | Ala | Ala | Leu |
| Pro 145 | Gly | Pro | Ala | Asp | | | | | | | | | | | |

<210> 487

<211> 217

<212> PRT

<213> homo sapiens

<400> 487

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|----------|-----|-----|-----|----------|-----|-----|-----|-----|-----------|-----|-----|-----|-----|-----------|-----|
| Phe 1 | Leu | Gly | Asn | Gly 5 | Arg | Thr | Thr | Leu | Gln 10 | Ser | Thr | Glu | Ala | Gly 15 | Gly |
|----------|-----|-----|-----|----------|-----|-----|-----|-----|-----------|-----|-----|-----|-----|-----------|-----|

| | | | | | | | | | | | | | | | |
|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Ala | Arg | Gly | Arg 20 | Leu | Arg | Pro | Lys | Val 25 | Arg | Ala | Gly | Gly | Val 30 | Pro | Gly |
| Ser | Arg | Asp 35 | Arg | Gln | Glu | Gly | Ala 40 | Gln | Lys | Leu | Leu | Lys 45 | Ile | Ser | Arg |
| Phe | Leu 50 | Phe | Gln | Ser | Ile | Cys 55 | Gly | Ala | Arg | Leu | Leu 60 | Thr | Arg | Met | Ala |
| Arg 65 | Ala | Phe | Ser | Leu | Ala 70 | Ser | Ala | Ala | Val | Gly 75 | Leu | Arg | Trp | Arg | Pro 80 |
| Leu | Ser | Trp | Lys | Gly 85 | Ser | Cys | Phe | Gln | Ala 90 | Leu | Pro | Ser | Ser | Val 95 | Ser |
| Leu | Ser | Glu | Pro 100 | Gly | Arg | Ser | Leu | Arg 105 | Asp | Glu | His | Ala | Glu 110 | Pro | Pro |
| Leu | Ser | Trp 115 | Ala | Gly | Leu | Val | Pro 120 | Leu | Val | Thr | Gly | Asp 125 | Gly | Arg | Gly |
| Pro | Ser 130 | Thr | Cys | Ser | Ser | Val 135 | Gly | Val | Thr | Arg | Ser 140 | Arg | Leu | Lys | Cys |
| Ser 145 | Ser | Val | Ser | Gly | Ser 150 | Thr | Thr | Ser | Ser | Arg 155 | Ala | Ser | Ser | Ser | Arg 160 |
| Ala | Leu | Met | Leu | Ala 165 | Thr | Thr | Ser | Ala | Trp 170 | Arg | Ser | Pro | Ser | Thr 175 | Phe |
| Cys | Pro | Phe | Thr 180 | Ser | Met | Ser | Arg | Ser 185 | Trp | Ala | Arg | Arg | Pro 190 | Glu | Arg |
| Ala | Ala | Gly 195 | Glu | Pro | Gly | Ser | Thr 200 | Glu | Arg | Met | Tyr | Trp 205 | Pro | Gly | Arg |
| Asp | Leu 210 | Ser | Leu | Cys | Arg | Leu 215 | Asn | Pro | | | | | | | |

<210> 488

<211> 298

<212> PRT

<213> homo sapiens

<400> 488

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|-----------|-----------|-----------|-----------|----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Glu 1 | Ile | Arg | Ala | Val 5 | Gly | Gly | Gly | Val | Cys 10 | Val | Asp | Gly | Met | Gly 15 | Thr |
| Pro | Gly | Glu | Gly 20 | Leu | Gly | Arg | Cys | Ser 25 | His | Ala | Leu | Ile | Arg 30 | Gly | Val |
| Pro | Glu | Ser 35 | Leu | Ala | Ser | Gly | Glu 40 | Gly | Ala | Gly | Ala | Gly 45 | Leu | Pro | Ala |
| Leu | Asp 50 | Leu | Ala | Lys | Ala | Gln 55 | Arg | Glu | His | Gly | Val 60 | Leu | Gly | Gly | Lys |
| Leu 65 | Arg | Gln | Arg | Leu | Gly 70 | Leu | Gln | Leu | Leu | Glu 75 | Leu | Pro | Pro | Glu | Glu 80 |
| Ser | Leu | Pro | Leu | Gly | Pro | Leu | Leu | Gly | Asp | Thr | Ala | Val | Ile | Gln | Gly |

| | | | | 85 | | | | 90 | | | | 95 | | | |
|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Asp | Thr | Ala | Leu 100 | Ile | Thr | Arg | Pro | Trp 105 | Ser | Pro | Ala | Arg | Arg 110 | Pro | Glu |
| Val | Asp | Gly 115 | Val | Arg | Lys | Ala | Leu 120 | Gln | Asp | Leu | Gly | Leu 125 | Arg | Ile | Val |
| Glu | Ile 130 | Gly | Asp | Glu | Asn | Ala 135 | Thr | Leu | Asp | Gly | Thr 140 | Asp | Val | Leu | Phe |
| Thr 145 | Gly | Arg | Glu | Phe | Phe 150 | Val | Gly | Leu | Ser | Lys 155 | Trp | Thr | Asn | His | Arg 160 |
| Gly | Ala | Glu | Ile | Val 165 | Ala | Asp | Thr | Phe | Arg 170 | Asp | Phe | Ala | Val | Ser 175 | Thr |
| Val | Pro | Val | Ser 180 | Gly | Pro | Ser | His | Leu 185 | Arg | Gly | Leu | Cys | Gly 190 | Met | Gly |
| Gly | Pro | Arg 195 | Thr | Val | Val | Ala | Gly 200 | Ser | Ser | Asp | Ala | Ala 205 | Gln | Lys | Ala |
| Val | Arg 210 | Ala | Met | Ala | Val | Leu 215 | Thr | Asp | His | Pro | Tyr 220 | Ala | Ser | Leu | Thr |
| Leu 225 | Pro | Asp | Asp | Ala | Ala 230 | Ala | Asp | Cys | Leu | Phe 235 | Leu | Arg | Pro | Gly | Leu 240 |
| Pro | Gly | Val | Pro | Pro 245 | Phe | Leu | Leu | His | Arg 250 | Gly | Gly | Gly | Asp | Leu 255 | Pro |
| Asn | Ser | Gln | Glu 260 | Ala | Leu | Gln | Lys | Leu 265 | Ser | Asp | Val | Thr | Leu 270 | Val | Pro |
| Val | Ser | Cys 275 | Ser | Glu | Leu | Glu | Lys 280 | Ala | Gly | Ala | Gly | Leu 285 | Ser | Ser | Leu |
| Cys | Leu 290 | Val | Leu | Ser | Thr | Arg 295 | Pro | His | Ser | | | | | | |

<210> 489

<211> 175

<212> PRT

<213> homo sapiens

<400> 489

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|-----------|-----------|-----------|-----------|----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Ala 1 | Gly | His | Arg | Tyr 5 | Gln | Gly | Asp | Ile | Arg 10 | Glu | Leu | Leu | Gln | Cys 15 | Leu |
| Leu | Ala | Val | Gly 20 | Gln | Ile | Pro | Thr | Ser 25 | Thr | Val | Gln | Glu | Glu 30 | Arg | Gly |
| His | Thr | Arg 35 | Gln | Pro | Arg | Thr | Lys 40 | Lys | Glu | Thr | Val | Ser 45 | Ser | Cys | Val |
| Ile | Trp 50 | Glu | Gly | Gln | Gly | Gly 55 | Ile | Trp | Val | Ile | Cys 60 | Gln | His | Cys | His |
| Cys 65 | Pro | Asp | Ser | Leu | Leu 70 | Gly | Ser | Val | Ala | Ala 75 | Ala | Cys | His | Asn | Ser 80 |

| | | | | | | | | | | | | | | | |
|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Ala | Arg | Ser | Pro | His 85 | Ala | Ala | Glu | Thr | Ala 90 | Gln | Val | Gly | Gly | Thr 95 | Arg |
| Asp | Trp | His | Ser 100 | Gly | Asp | Gly | Glu | Val 105 | Pro | Glu | Arg | Val | Arg 110 | His | Asp |
| Leu | Ser | Ser 115 | Ser | Val | Ile | Gly | Pro 120 | Phe | Gly | Glu | Ala | Tyr 125 | Glu | Lys | Leu |
| Pro | Ala 130 | Gly | Glu | Glu | Asn | Val 135 | Ser | Ala | Ile | Gln | Arg 140 | Arg | Val | Leu | Val |
| Ser 145 | Tyr | Phe | His | Asn | Ser 150 | Glu | Pro | Gln | Val | Leu 155 | Gln | Gly | Phe | Ala | Asp 160 |
| Ser | Ile | Asp | Leu | Trp 165 | Pro | Thr | Ser | Gly | Ala 170 | Pro | Gly | Pro | Arg | Asp 175 | |

<210> 490
 <211> 150
 <212> PRT
 <213> homo sapiens

<400> 490

| | | | | | | | | | | | | | | | |
|------------|------------|------------|------------|-----------|------------|------------|------------|------------|-----------|-----------|------------|------------|------------|-----------|-----------|
| Leu 1 | Gly | Pro | Cys | Pro 5 | Leu | Gly | Ser | Arg | Pro 10 | Cys | Arg | Gln | Ala | Ala 15 | Val |
| Pro | Ala | Ala | Met 20 | Thr | Pro | Gln | Val | Ala 25 | Val | Leu | Ala | Ala | Val 30 | Ala | Pro |
| Val | Val | Ala 35 | Ser | Val | Tyr | Leu | Pro 40 | Ala | Pro | Arg | Ala | Pro 45 | Phe | Glu | Leu |
| Trp 50 | Pro | Asp | Pro | Glu | Arg | Glu 55 | Gly | Gln | Pro | Pro | His 60 | Leu | Pro | Pro | Thr |
| Pro 65 | Gly | Ser | Leu | Gly | Leu 70 | Pro | Gly | Ser | Gly | His 75 | Gly | Ser | Ser | Gly | Pro 80 |
| Ala | Pro | Pro | Pro | Ala 85 | Ser | Pro | Ser | His | Pro 90 | His | Arg | Leu | Pro | Leu 95 | Gln |
| Pro | Leu | Gly | Phe 100 | Leu | Ser | Phe | Leu | Val 105 | Ser | Ser | Pro | Val | Ser 110 | Ser | Gly |
| His | Pro | His 115 | Ser | Cys | Arg | Ala | Val 120 | Ile | Ser | Ala | Gly | Ala 125 | Pro | Pro | Pro |
| Glu | Asp 130 | Arg | Val | Gly | Gly | Glu 135 | Gly | Ser | Pro | Arg | Leu 140 | Gln | Ala | Ser | Gly |
| Thr 145 | Gly | Ser | Ser | Gly | Phe 150 | | | | | | | | | | |

<210> 491
 <211> 89
 <212> PRT
 <213> homo sapiens

<400> 491

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|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Phe | Val | Lys | Arg | Thr | Lys | Gln | Pro | Arg | Gln | Thr | Leu | Asp | Ala | Pro | Cys |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|

| | | | | | | | | | | | | | | | | |
|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----|-----------|-----------|-----------|-----------|-----|-----------|--|
| 1 | | | | 5 | | | | | 10 | | | | | 15 | | |
| Ser | Ala | Leu | Arg 20 | Leu | Trp | Gly | Arg | Cys 25 | Leu | Leu | Gly | Glu | Ala 30 | Val | Ala | |
| Gln | Gly | Val 35 | His | Cys | Glu | Ala | Gly 40 | Pro | Val | Asp | Ser | Ala 45 | Gly | Gly | Ile | |
| His | Leu 50 | Ala | Ser | Gly | Cys | Leu 55 | Val | Ser | Val | Tyr | Ser 60 | Asp | Ile | Ala | Phe | |
| Cys 65 | Cys | His | Leu | Ser | Cys 70 | Gly | Gln | Arg | Gly | Val 75 | Ser | Trp | His | Glu | Asn 80 | |
| Ile | Phe | Phe | Phe | Lys 85 | Cys | Gly | Ser | Phe | | | | | | | | |

<210> 492
 <211> 63
 <212> PRT
 <213> homo sapiens

<400> 492

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|----------|-----------|-----------|-----------|----------|-----|-----------|-----------|-----------|-----------|-----|-----------|-----------|-----------|-----------|-----|--|
| Leu 1 | Thr | His | Leu | Leu 5 | Phe | Glu | Lys | Cys | Leu 10 | Leu | Pro | Ser | Leu | Gly 15 | Leu | |
| Ile | Thr | Lys | Phe 20 | Asp | His | Asp | His | Ile 25 | Val | Val | Ser | Gln | Ser 30 | Ala | Leu | |
| Glu | Ile | Val 35 | Ser | Gly | Leu | His | Glu 40 | Val | Ala | Met | Gly | Val 45 | Trp | Ser | Thr | |
| Leu | Lys 50 | Leu | Tyr | Gln | Ser | Cys 55 | Thr | Tyr | Phe | Gln | Thr 60 | Phe | Leu | Lys | | |

<210> 493
 <211> 73
 <212> PRT
 <213> homo sapiens

<400> 493

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|-----------|-----------|-----------|-----------|----------|-----------|-----------|-----------|-----------|-----------|-----|-----------|-----------|-----------|-----------|-----|--|
| Asp 1 | Gly | Ser | Arg | Met 5 | Leu | Cys | His | Tyr | Ile 10 | Gln | Lys | Gln | Asp | Asn 15 | Leu | |
| Lys | Leu | Asn | Gly 20 | Cys | Pro | Leu | Gln | Ser 25 | Gln | Gln | Val | Gln | Pro 30 | His | Ser | |
| Ala | Arg | Pro 35 | Glu | Leu | Gln | Pro | Leu 40 | Pro | Lys | Gly | Ile | Phe 45 | Pro | Thr | Ala | |
| Ser | Thr 50 | Pro | Ser | Lys | Glu | His 55 | Gln | Gly | Phe | Val | Ser 60 | Val | Val | Leu | Phe | |
| Phe 65 | Leu | Gln | Thr | Ile | Asp 70 | Ile | Tyr | Ser | | | | | | | | |

<210> 494
 <211> 318
 <212> PRT
 <213> homo sapiens

<400> 494

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|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Lys 1 | Cys | Ala | Thr | Phe 5 | Trp | Ser | Phe | Pro | Arg 10 | Arg | Gln | Gly | Gly | Leu 15 | Gly |
| Ile | Ala | Ile | Ser 20 | Glu | Glu | Asp | Thr | Leu 25 | Ser | Gly | Val | Ile | Ile 30 | Lys | Ser |
| Leu | Thr | Glu 35 | His | Gly | Val | Ala | Ala 40 | Thr | Asp | Gly | Arg | Leu 45 | Lys | Val | Gly |
| Asp | Gln 50 | Ile | Leu | Ala | Val | Asp 55 | Asp | Glu | Ile | Val | Val 60 | Gly | Tyr | Pro | Ile |
| Glu 65 | Lys | Phe | Ile | Ser | Leu 70 | Leu | Lys | Thr | Ala | Lys 75 | Met | Thr | Val | Lys | Leu 80 |
| Thr | Ile | His | Ala | Glu 85 | Asn | Pro | Asp | Ser | Gln 90 | Ala | Val | Pro | Ser | Ala 95 | Ala |
| Gly | Ala | Ala | Ser 100 | Gly | Glu | Lys | Lys | Asn 105 | Ser | Ser | Gln | Ser | Leu 110 | Met | Val |
| Pro | Gln | Ser 115 | Gly | Ser | Pro | Glu | Pro 120 | Glu | Ser | Ile | Arg | Asn 125 | Thr | Ser | Arg |
| Ser | Ser 130 | Thr | Pro | Ala | Ile | Phe 135 | Ala | Ser | Asp | Pro | Ala 140 | Thr | Cys | Pro | Ile |
| Ile 145 | Pro | Gly | Cys | Glu | Thr 150 | Thr | Ile | Glu | Ile | Ser 155 | Lys | Gly | Arg | Thr | Gly 160 |
| Leu | Gly | Leu | Ser | Ile 165 | Val | Gly | Gly | Ser | Asp 170 | Thr | Leu | Leu | Gly | Ala 175 | Ile |
| Ile | Ile | His | Glu 180 | Val | Tyr | Glu | Glu | Gly 185 | Ala | Ala | Cys | Lys | Asp 190 | Gly | Arg |
| Leu | Trp | Ala 195 | Gly | Asp | Gln | Ile | Leu 200 | Glu | Val | Asn | Gly | Ile 205 | Asp | Leu | Arg |
| Lys | Ala 210 | Thr | His | Asp | Glu | Ala 215 | Ile | Asn | Val | Leu | Arg 220 | Gln | Thr | Pro | Gln |
| Arg 225 | Val | Arg | Leu | Thr | Leu 230 | Tyr | Arg | Asp | Glu | Ala 235 | Pro | Tyr | Lys | Glu | Glu 240 |
| Glu | Val | Cys | Asp | Thr 245 | Leu | Thr | Ile | Glu | Leu 250 | Gln | Lys | Lys | Pro | Gly 255 | Lys |
| Gly | Leu | Gly | Leu 260 | Ser | Ile | Val | Gly | Lys 265 | Arg | Asn | Asp | Thr | Gly 270 | Val | Phe |
| Val | Ser | Asp 275 | Ile | Val | Lys | Gly | Gly 280 | Ile | Ala | Asp | Ala | Asp 285 | Gly | Arg | Leu |
| Met | Gln 290 | Gly | Asp | Gln | Ile | Leu 295 | Met | Val | Asn | Gly | Glu 300 | Asp | Val | Arg | Asn |
| Ala 305 | Thr | Gln | Glu | Ala | Val 310 | Ala | Val | Trp | Ile | Lys 315 | Val | Phe | Pro | | |

<210> 495

<211> 206
 <212> PRT
 <213> homo sapiens

<400> 495

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| Ser 1 | Ala | Phe | Ala | Glu 5 | Met | Gly | Ser | Asp | His 10 | Thr | Gln | Ser | Ser | Ala 15 | Ser |
| Lys | Ile | Ser | Gln 20 | Asp | Val | Asp | Lys | Glu 25 | Asp | Glu | Phe | Gly | Tyr 30 | Ser | Trp |
| Lys | Asn | Ile 35 | Arg | Glu | Arg | Tyr | Gly 40 | Thr | Leu | Thr | Gly | Glu 45 | Leu | His | Met |
| Ile | Glu 50 | Leu | Glu | Lys | Gly | His 55 | Ser | Gly | Leu | Gly | Leu 60 | Ser | Leu | Ala | Gly |
| Asn 65 | Lys | Asp | Arg | Ser | Arg 70 | Met | Ser | Val | Phe | Ile 75 | Val | Gly | Ile | Asp | Pro 80 |
| Asn | Gly | Ala | Ala | Gly 85 | Lys | Asp | Gly | Arg | Leu 90 | Gln | Ile | Ala | Asp | Glu 95 | Leu |
| Leu | Glu | Ile | Asn 100 | Gly | Gln | Ile | Leu | Tyr 105 | Gly | Arg | Ser | His | Gln 110 | Asn | Ala |
| Ser | Ser | Ile 115 | Ile | Lys | Cys | Ala | Pro 120 | Ser | Lys | Val | Lys | Ile 125 | Ile | Phe | Ile |
| Arg | Asn 130 | Lys | Asp | Ala | Val | Asn 135 | Gln | Met | Ala | Val | Cys 140 | Pro | Gly | Asn | Ala |
| Val 145 | Glu | Pro | Leu | Pro | Ser 150 | Asn | Ser | Glu | Asn 155 | Leu | Gln | Asn | Lys | Glu | Thr 160 |
| Glu | Pro | Thr | Val | Thr 165 | Thr | Ser | Asp | Ala | Ala 170 | Val | Asp | Leu | Ser | Ser 175 | Phe |
| Lys | Asn | Val | Gln 180 | His | Ser | Gly | Ala | Ser 185 | Gln | Gly | Gly | Arg | Gly 190 | Val | Trp |
| Val | Leu | Leu 195 | Ser | Ala | Lys | Lys | Ile 200 | His | Ser | Val | Glu | Ser 205 | Ser | | |

<210> 496
 <211> 119
 <212> PRT
 <213> homo sapiens

<400> 496

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| Thr 1 | Ser | Trp | Ile | Ile 5 | Met | Ala | Pro | Ser | Ser 10 | Val | Ser | Glu | Pro | Pro 15 | Thr |
| Met | Leu | Arg | Pro 20 | Ser | Pro | Val | Arg | Pro 25 | Leu | Glu | Ile | Ser | Met 30 | Val | Val |
| Ser | Gln | Pro 35 | Gly | Ile | Met | Gly | Gln 40 | Val | Ala | Gly | Ser | Glu 45 | Ala | Lys | Ile |
| Ala | Gly 50 | Val | Asp | Asp | Leu | Leu 55 | Val | Phe | Arg | Met | Asp 60 | Ser | Gly | Ser | Gly |

| | | | | | | | | | | | | | | | |
|-----------|-----|------------|------------|-----------|-----------|-----|-----|------------|-----------|-----------|-----|-----|------------|-----------|-----------|
| Glu 65 | Pro | Asp | Cys | Gly | Thr 70 | Ile | Arg | Asp | Trp | Glu 75 | Leu | Phe | Phe | Phe | Ser 80 |
| Pro | Leu | Ala | Ala | Pro 85 | Ala | Ala | Glu | Gly | Thr 90 | Ala | Trp | Glu | Ser | Gly 95 | Phe |
| Ser | Ala | Trp | Met 100 | Val | Ser | Phe | Thr | Val 105 | Ile | Phe | Ala | Val | Phe 110 | Arg | Arg |
| Leu | Ile | Asn 115 | Phe | Ser | Ile | Gly | | | | | | | | | |

<210> 497
 <211> 71
 <212> PRT
 <213> homo sapiens

<400> 497

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| Ser 1 | Ala | Pro | Ser | Leu 5 | Thr | Lys | Cys | Arg | Ser 10 | Thr | His | Val | Tyr | Pro 15 | Leu |
| Ser | Leu | Ile | Met 20 | Phe | Met | Ser | Gly | Gly 25 | Ser | Ser | Arg | Ser | Thr 30 | Leu | Arg |
| Arg | Met | Val 35 | Pro | Thr | Pro | Ser | Thr 40 | Thr | Ser | Leu | Ser | Pro 45 | Arg | Ser | Ser |
| Ser | Ser 50 | Thr | Ser | Lys | Leu | Leu 55 | Thr | Gln | Ser | Gly | Pro 60 | Ser | Leu | Pro | Gln |
| Pro 65 | Pro | Ala | Ser | Arg | Pro 70 | Phe | | | | | | | | | |

<210> 498
 <211> 139
 <212> PRT
 <213> homo sapiens

<400> 498

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| Ser 1 | Arg | Ser | Pro | Ala 5 | Cys | Gly | Ala | Ser | Glu 10 | His | Gly | Asp | Gly | Ala 15 | Met |
| Ser | Leu | Ile | Cys 20 | Ser | Ile | Ser | Asn | Glu 25 | Val | Pro | Glu | His | Pro 30 | Cys | Val |
| Ser | Pro | Val 35 | Ser | Asn | His | Val | Tyr 40 | Glu | Arg | Arg | Leu | Ile 45 | Glu | Lys | Tyr |
| Ile | Ala 50 | Glu | Asn | Gly | Thr | Asp 55 | Pro | Ile | Asn | Asn | Gln 60 | Pro | Leu | Ser | Glu |
| Glu 65 | Gln | Leu | Ile | Asp | Ile 70 | Lys | Val | Ala | His | Pro 75 | Ile | Arg | Pro | Lys | Pro 80 |
| Pro | Ser | Ala | Thr | Ser 85 | Ile | Pro | Ala | Ile | Leu 90 | Lys | Ala | Leu | Gln | Asp 95 | Glu |
| Trp | Asp | Ala | Val 100 | Met | Leu | His | Ser | Phe 105 | Thr | Leu | Arg | Gln | Ser 110 | Cys | Arg |

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gln | Pro | Ala | Lys | Ser | Cys | His | Thr | Leu | Cys | Thr | Ser | Thr | Met | Pro | Pro |
| | | 115 | | | | | 120 | | | | | 125 | | | |
| Ala | Val | Ser | Leu | Pro | Val | Ser | Pro | Arg | Lys | Leu | | | | | |
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<400> 499

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| Thr | Thr | Gly | Arg | Glu | Arg | Gly | Cys | Arg | Pro | Cys | Ala | Gly | Leu | Phe | Tyr |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Cys | Phe | Leu | Phe | Leu | Met | Lys | Leu | Asp | His | Cys | Leu | Gln | Asn | Pro | Ala |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Gln | Ala | Leu | Leu | Pro | Ile | Pro | Phe | Thr | Val | Ser | Leu | Val | Arg | Arg | Ala |
| | | 35 | | | | | 40 | | | | | 45 | | | |
| Met | Thr | Arg | Gln | Ala | Ala | Ser | Cys | Trp | Tyr | Arg | Ala | Cys | Asp | Ser | Ser |
| | 50 | | | | | 55 | | | | | 60 | | | | |
| Trp | Arg | Val | Val | Cys | Ser | Ser | Gly | Ala | Glu | | | | | | |
| 65 | | | | | 70 | | | | | | | | | | |

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<400> 500

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| Phe | Ser | Phe | Phe | Asn | Glu | Thr | Arg | Ser | Leu | Leu | Thr | Lys | Pro | Cys | Thr |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Ser | Pro | Pro | Ala | His | Pro | Leu | His | Ser | Ser | Leu | Gly | Ser | Ala | Ser | Pro |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Val | Ser | Gln | Glu | Leu | Gln | Gln | Asn | Gly | Cys | Gly | Thr | Ala | Thr | Thr | Thr |
| | | 35 | | | | | 40 | | | | | 45 | | | |
| Ser | Ile | Glu | Arg | Gln | Glu | Gly | Arg | Gly | Ala | Val | Gly | Leu | Val | Gln | Gly |
| | 50 | | | | | 55 | | | | | 60 | | | | |
| Phe | Phe | Ile | Val | Phe | Phe | Phe | | | | | | | | | |
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<210> 501
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 <212> PRT
 <213> homo sapiens

<400> 501

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| Glu | Ala | Arg | Gly | Leu | Ala | Thr | Arg | Thr | Arg | Ser | Gly | Ala | Ala | Ala | His |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Ala | Gly | Asp | Arg | Phe | Thr | Asp | Ala | Asp | Asp | Val | Ala | Ile | Leu | Thr | Tyr |
| | | | 20 | | | | | 25 | | | | | 30 | | |

| | | | | | | | | | | | | | | | |
|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Val | Lys | Glu 35 | Asn | Ala | Arg | Ser | Pro 40 | Ser | Ser | Val | Thr | Gly 45 | Asn | Ala | Leu |
| Trp | Lys 50 | Ala | Met | Glu | Lys | Ser 55 | Ser | Leu | Thr | Gln | His 60 | Ser | Trp | Gln | Ser |
| Leu 65 | Lys | Asp | Arg | Tyr | Leu 70 | Lys | His | Leu | Arg | Gly 75 | Gln | Glu | His | Lys | Tyr 80 |
| Leu | Leu | Gly | Asp | Ala 85 | Pro | Val | Ser | Pro | Ser 90 | Ser | Gln | Lys | Leu | Lys 95 | Arg |
| Lys | Ala | Glu | Glu 100 | Asp | Pro | Glu | Ala | Ala 105 | Asp | Ser | Gly | Glu | Pro 110 | Gln | Asn |
| Lys | Arg | Thr 115 | Pro | Asp | Leu | Pro | Glu 120 | Glu | Glu | Tyr | Val | Lys 125 | Glu | Glu | Ile |
| Gln | Glu 130 | Asn | Glu | Glu | Ala | Val 135 | Lys | Lys | Met | Leu | Val 140 | Glu | Ala | Thr | Arg |
| Glu 145 | Phe | Glu | Glu | Val | Val 150 | Val | Asp | Glu | Ser | Pro 155 | Pro | Asp | Phe | Glu | Ile 160 |
| His | Ile | Thr | Met | Cys 165 | Asp | Asp | Asp | Pro | Pro 170 | Thr | Pro | Glu | Glu | Asp 175 | Ser |
| Glu | Thr | Gln | Pro 180 | Asp | Glu | Glu | Glu 185 | Glu | Glu | Glu | Glu | Glu | Lys 190 | Val | Ser |
| Gln | Pro | Glu 195 | Val | Gly | Ala | Ala | Ile 200 | Lys | Ile | Ile | Arg | Gln 205 | Leu | Met | Glu |
| Lys | Phe 210 | Asn | Leu | Asp | Leu | Ser 215 | Thr | Val | Thr | Gln | Ala 220 | Phe | Leu | Lys | Asn |
| Ser 225 | Gly | Glu | Leu | Glu | Ala 230 | Thr | Ser | Ala | Phe | Leu 235 | Ala | Ser | Gly | Gln | Arg 240 |
| Ala | Asp | Gly | Tyr | Pro 245 | Ile | Trp | Ser | Arg | Gln 250 | Asp | Asp | Ile | Asp | Leu 255 | Gln |
| Lys | Asp | Asp | Glu 260 | Asp | Thr | Arg | Glu | Ala 265 | Leu | Val | Lys | Lys | Phe 270 | Gly | Ala |
| Gln | Asn | Val 275 | Ala | Arg | Arg | Ile | Glu 280 | Phe | Arg | Lys | Lys | | | | |

<210> 502

<211> 123

<212> PRT

<213> homo sapiens

<400> 502

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| Glu 1 | Thr | Phe | Ser | Ser 5 | Ser | Ser | Ser | Ser | Ser 10 | Ser | Ser | Gly | Cys | Val 15 | Ser |
| Glu | Ser | Ser | Ser 20 | Gly | Val | Gly | Gly | Ser 25 | Ser | Ser | His | Ile | Val 30 | Ile | Cys |
| Ile | Ser | Lys 35 | Ser | Gly | Gly | Leu | Ser 40 | Ser | Thr | Thr | Thr | Ser 45 | Ser | Asn | Ser |

| | | | | | | | | | | | | | | | |
|-----------|-----------|------------|------------|-----------|-----------|-----------|------------|------------|-----------|-----------|-----------|-----|------------|-----------|-----------|
| Arg | Val 50 | Ala | Ser | Thr | Ser | Ile 55 | Phe | Leu | Thr | Ala | Ser 60 | Ser | Phe | Ser | Trp |
| Ile 65 | Ser | Ser | Phe | Thr | Tyr 70 | Ser | Ser | Ser | Gly | Lys 75 | Ser | Gly | Val | Leu | Leu 80 |
| Phe | Cys | Gly | Ser | Pro 85 | Leu | Ser | Ala | Ala | Ser 90 | Gly | Ser | Ser | Ser | Ala 95 | Phe |
| Arg | Leu | Ser | Phe 100 | Trp | Glu | Glu | Gly | Leu 105 | Thr | Gly | Ala | Ser | Pro 110 | Ser | Arg |
| Tyr | Leu | Cys 115 | Ser | Trp | Pro | Arg | Arg 120 | Cys | Leu | Arg | | | | | |

<210> 503
 <211> 175
 <212> PRT
 <213> homo sapiens

<400> 503

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| Val 1 | Phe | Leu | Arg | Cys 5 | Gly | Trp | Ile | Ile | Ile 10 | Thr | His | Ser | Tyr | Met 15 | Tyr |
| Phe | Lys | Ile | Arg 20 | Arg | Ala | Leu | Ile | His 25 | His | Asn | Leu | Leu | Lys 30 | Leu | Pro |
| Gly | Gly | Phe 35 | His | Lys | His | Leu | Phe 40 | Asp | Cys | Phe | Phe | Ile 45 | Leu | Leu | Asp |
| Phe | Phe 50 | Leu | His | Ile | Leu | Phe 55 | Phe | Arg | Gln | Ile | Trp 60 | Ser | Ser | Leu | Ile |
| Leu 65 | Trp | Phe | Pro | Ala | Ile 70 | Arg | Gly | Leu | Arg | Val 75 | Leu | Leu | Arg | Leu | Pro 80 |
| Leu | Glu | Leu | Leu | Gly 85 | Gly | Gly | Ala | His | Arg 90 | Arg | Val | Pro | Gln | Gln 95 | Val |
| Leu | Met | Leu | Leu 100 | Ala | Pro | Gln | Val | Leu 105 | Glu | Val | Ala | Val | Leu 110 | Gln | Gly |
| Leu | Pro | Arg 115 | Val | Leu | Arg | Glu | Arg 120 | Ala | Leu | Leu | His | Arg 125 | Phe | Pro | Gln |
| Gly | Val 130 | Thr | Gly | Asp | Gly | Ala 135 | Gly | Arg | Ala | Gly | Ile 140 | Phe | Leu | His | Val |
| Gly 145 | Lys | Asp | Gly | Tyr | Val 150 | Val | Arg | Ile | Arg | Glu 155 | Ala | Ile | Ala | Arg | Val 160 |
| Arg | Cys | Arg | Ser | Ala 165 | Pro | Arg | Ala | Arg | Arg 170 | Gln | Ala | Pro | Gly | Phe 175 | |

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<400> 504

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| Cys 1 | Pro | Pro | Glu | Lys 5 | Ser | Leu | Gln | Met | Phe 10 | Gln | Pro | Leu | Ser | Ser 15 | Pro |
| Asp | Ser | His | Arg 20 | Lys | Gly | Thr | Gly | Phe 25 | Gly | Leu | Gly | Ile | Val 30 | Phe | Ser |
| Leu | Thr | Phe 35 | Phe | Lys | Arg | Arg | Met 40 | Trp | Pro | Leu | Ala | Phe 45 | Gly | Ser | Gly |
| Met | Gly 50 | Leu | Gly | Met | Ala | Tyr 55 | Ser | Asn | Cys | Gln | His 60 | Asp | Phe | Gln | Ala |
| Pro 65 | Tyr | Leu | Leu | His | Gly 70 | Lys | Tyr | Val | Lys | Glu 75 | Gln | Glu | Gln | | |

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 <211> 95
 <212> PRT
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<400> 505

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| Ser 1 | Lys | Thr | Ser | Thr 5 | Leu | Pro | Val | Ala | Ile 10 | Trp | Thr | Arg | Gln | Arg 15 | Leu |
| Glu | His | Leu | Gln 20 | Gly | Phe | Leu | Gly | Trp 25 | Thr | Ser | Ile | Thr | Arg 30 | Ile | Leu |
| Ser | Ser | Arg 35 | Pro | His | Pro | Pro | Asp 40 | Thr | Gly | Pro | Thr | Ser 45 | Cys | Arg | Ala |
| Pro | Thr 50 | Gln | Thr | Cys | Ser | Pro 55 | Pro | Ala | Pro | Pro | Ala 60 | Phe | Leu | Ser | Ala |
| Gly 65 | Pro | Arg | Ala | Pro | Thr 70 | Pro | Glu | Ser | Leu | Ala 75 | Arg | Ala | Gly | Asn | Lys 80 |
| Ser | Gln | Val | Arg | Lys 85 | Ala | Gly | Ala | Asp | Ala 90 | Pro | Asp | Ile | Ala | Arg 95 | |

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<400> 506

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| Ala 1 | Ile | Pro | Asn | Pro 5 | Met | Pro | Glu | Pro | Lys 10 | Ala | Asn | Gly | His | Ile 15 | Leu |
| Leu | Leu | Lys | Lys 20 | Val | Ser | Glu | Lys | Thr 25 | Ile | Pro | Asn | Pro | Lys 30 | Pro | Val... |
| Pro | Phe | Leu 35 | Trp | Leu | Ser | Gly | Leu 40 | Asp | Arg | Gly | Trp | Asn 45 | Ile | Cys | Arg |
| Asp | Phe 50 | Ser | Gly | Gly | His | Gln 55 | Leu | Pro | Gly | Phe | Tyr 60 | Leu | His | Asp | Arg |
| Ile 65 | Arg | Gln | Thr | Pro | Val 70 | Pro | Leu | Pro | Ala | Glu 75 | Leu | Arg | Leu | Arg | His 80 |
| Val | Pro | His | Pro | Arg | Leu | Gln | Leu | Ser | Ser | Arg | Pro | Ala | Pro | Ala | Leu |

| 85 | | | | | | | | 90 | | | | 95 | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Arg | Pro | Leu | Lys | Val | Ser | Arg | Glu | Leu | Glu | Thr | Ser | Pro | Arg | Ser | Gly |
| | | | 100 | | | | | 105 | | | | | 110 | | |
| Arg | Gln | Ala | Gln | Thr | Leu | Gln | Ile | Ser | Arg | Asp | Asp | Pro | Leu | Leu | Pro |
| | | 115 | | | | | 120 | | | | | 125 | | | |
| Ser | Leu | Pro | Val | Phe | Ser | Val | Gly | Arg | Gln | Gly | Asp | Ala | Val | Val | Trp |
| | 130 | | | | | 135 | | | | | 140 | | | | |
| Arg | Leu | Glu | Val | Thr | Leu | Thr | Leu | Gly | Cys | Ala | Tyr | | | | |
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 <212> PRT
 <213> homo sapiens

<400> 507

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| Ala | Ala | Ser | Gly | Met | Leu | Gly | Ser | Trp | Pro | Ala | Arg | Thr | Phe | His | Pro |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Gly | Ala | Cys | Val | Ser | Arg | Arg | Pro | Ser | Ala | Pro | Trp | Lys | His | Thr | Ala |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Ser | Gly | Lys | Asp | Ser | Pro | Asp | Leu | Arg | Phe | Ser | Glu | His | Gly | Val | Ser |
| | | 35 | | | | | 40 | | | | | 45 | | | |
| Gln | Glu | Phe | Trp | Ala | Gly | Gly | Leu | Val | Ala | Val | Leu | Glu | Met | Thr | Pro |
| | 50 | | | | | 55 | | | | | 60 | | | | |
| Ser | Pro | Ser | Pro | Trp | Gly | Thr | Gln | Glu | Gly | Pro | Ala | Gly | Met | Cys | Ser |
| 65 | | | | | 70 | | | | | 75 | | | | | 80 |
| Leu | Trp | Val | Val | Gly | Trp | Cys | Pro | Cys | Arg | Gly | Ala | Gly | Val | Arg | Asp |
| | | | | 85 | | | | | 90 | | | | | 95 | |
| Leu | Val | Leu | Val | His | Ala | Gly | Val | Trp | Cys | Lys | His | Val | Cys | Ala | Val |
| | | | 100 | | | | | 105 | | | | | 110 | | |
| Gln | Arg | Asp | Ala | Cys | Gly | Glu | Ser | Arg | Thr | Pro | Ala | Pro | Pro | Arg | Lys |
| | | 115 | | | | | 120 | | | | | 125 | | | |
| Gly | Gly | Ala | Val | Thr | Ser | Val | Leu | Cys | Leu | Phe | Leu | Ile | Lys | Thr | Phe |
| | 130 | | | | | 135 | | | | | 140 | | | | |
| Pro | Leu | Phe | Ser | Tyr | Lys | Phe | Ala | Ser | Cys | Lys | Gln | Val | His | Lys | Asp |
| 145 | | | | | 150 | | | | | 155 | | | | | 160 |
| Pro | Pro | Leu | Val | Lys | Ser | Gly | Phe | Glu | | | | | | | |
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<400> 508

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| Thr | Gln | Asn | Thr | Gly | Asn | Arg | Ser | Ala | Phe | Pro | Gly | Trp | Arg | Trp | Cys |
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145

<210> 510
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 <212> PRT
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<400> 510

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| Asn | Ala | Tyr | Ile | Ser | Gly | Tyr | Glu | Arg | Asp | Phe | Met | Thr | Ile | Gln | Ser |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Asn | Ile | Thr | Leu | Ala | Asp | Arg | Glu | Thr | Glu | Val | Phe | His | Asp | Leu | Pro |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Ser | Leu | Pro | Ala | Ser | Leu | Arg | Gln | Asn | Trp | Ile | Pro | Thr | Leu | Val | Phe |
| | | 35 | | | | | 40 | | | | | 45 | | | |
| Phe | Leu | Pro | Phe | Thr | Ser | Phe | Ser | Leu | Leu | Tyr | Asn | Val | Leu | Arg | Asp |
| | 50 | | | | | 55 | | | | | 60 | | | | |
| Gln | Asn | Ser | His | Gln | Asn | Arg | Leu | Phe | Leu | Arg | | | | | |
| 65 | | | | | 70 | | | | | 75 | | | | | |

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<400> 511

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| Phe | Arg | Asp | Thr | Glu | Gly | Leu | Leu | Ala | Leu | Met | Thr | Phe | Trp | Met | Gly |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Leu | Gln | Leu | Met | Thr | Ile | Leu | Ile | Leu | Glu | Glu | Arg | Thr | Leu | Leu | Ile |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Phe | Ser | Pro | Ile | Ala | Leu | Leu | Arg | Arg | Ser | Thr | Ser | Tyr | Ser | Glu | Ser |
| | | 35 | | | | | 40 | | | | | 45 | | | |
| Leu | His | Ile | Pro | Leu | Val | Phe | Leu | Gln | Ala | Pro | Glu | Pro | Leu | Val | Gln |
| | 50 | | | | | 55 | | | | | 60 | | | | |
| Met | Leu | Tyr | | | | | | | | | | | | | |
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<400> 512

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| Ile | Phe | Phe | Phe | Phe | Phe | Phe | Phe | Phe | Phe | Pro | Leu | Arg | His | Leu | Phe |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Asn | Asn | Cys | Arg | Asn | Pro | Lys | Glu | Leu | Ala | Ser | Asn | Leu | Glu | Val | Val |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Ser | Glu | Ala | Ala | Gly | Trp | Leu | Asp | Trp | Ala | Gln | Pro | Leu | Ser | Cys | Leu |
| | | 35 | | | | | 40 | | | | | 45 | | | |
| Asn | Arg | Pro | Arg | Asn | Gly | Ile | Met | Met | Thr | Met | Arg | Thr | Ser | Ile | Leu |

| | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|
| | 50 | | | | | 55 | | | | | | 60 | | | | |
| Ser | Ser | Ser | His | Cys | Val | Tyr | Tyr | Val | Phe | Ser | Phe | Asn | Lys | Ala | Phe | |
| 65 | | | | | 70 | | | | | 75 | | | | | 80 | |
| Val | Pro | Met | Ala | Leu | Glu | Leu | Gly | Gly | Arg | Leu | Lys | Glu | Cys | Val | Val | |
| | | | | 85 | | | | | 90 | | | | | 95 | | |
| Ile | Leu | Ser | Lys | Met | | | | | | | | | | | | |
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<210> 513
 <211> 179
 <212> PRT
 <213> homo sapiens

<400> 513

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| Phe | Gly | Thr | Met | Gly | Gly | Ile | Ser | Asp | Pro | Asp | Thr | Leu | His | Ile | Trp | |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | | |
| Lys | Thr | Asn | Ser | Leu | Pro | Leu | Arg | Phe | Trp | Val | Asn | Ile | Leu | Lys | Asn | |
| | | | 20 | | | | | 25 | | | | | 30 | | | |
| Pro | Gln | Phe | Val | Phe | Asp | Ile | Asp | Lys | Thr | Asp | His | Ile | Asp | Ala | Cys | |
| | | 35 | | | | | 40 | | | | | 45 | | | | |
| Leu | Ser | Val | Ile | Ala | Gln | Ala | Phe | Ile | Asp | Ala | Cys | Ser | Ile | Ser | Asp | |
| | 50 | | | | | 55 | | | | | 60 | | | | | |
| Leu | Gln | Leu | Gly | Lys | Asp | Ser | Pro | Thr | Asn | Lys | Leu | Leu | Tyr | Ala | Lys | |
| 65 | | | | 70 | | | | | | 75 | | | | | 80 | |
| Glu | Ile | Pro | Glu | Tyr | Arg | Lys | Ile | Val | Gln | Arg | Tyr | Tyr | Lys | Gln | Ile | |
| | | | | 85 | | | | | 90 | | | | | 95 | | |
| Gln | Asp | Met | Thr | Pro | Leu | Ser | Glu | Gln | Glu | Met | Asn | Ala | His | Leu | Ala | |
| | | | 100 | | | | | 105 | | | | | 110 | | | |
| Glu | Glu | Ser | Arg | Lys | Tyr | Gln | Asn | Glu | Phe | Asn | Thr | Asn | Val | Ala | Met | |
| | | 115 | | | | | 120 | | | | | 125 | | | | |
| Ala | Glu | Ile | Tyr | Lys | Tyr | Ala | Lys | Arg | Tyr | Arg | Pro | Gln | Ile | Met | Ala | |
| | 130 | | | | | 135 | | | | | 140 | | | | | |
| Ala | Leu | Glu | Ala | Asn | Pro | Thr | Ala | Arg | Arg | Thr | Gln | Leu | Gln | His | Lys | |
| 145 | | | | | 150 | | | | | 155 | | | | | 160 | |
| Phe | Glu | Gln | Val | Val | Ala | Leu | Met | Glu | Asp | Asn | Ile | Tyr | Glu | Cys | Tyr | |
| | | | | 165 | | | | | 170 | | | | | 175 | | |
| Ser | Glu | Ala | | | | | | | | | | | | | | |

<210> 514
 <211> 179
 <212> PRT
 <213> homo sapiens

<400> 514

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| Asp | Arg | Gly | Ala | Pro | Ala | Leu | Thr | Pro | Gly | His | Leu | His | Pro | Leu | Pro | |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | | |

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|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|--|
| Pro | Val | Pro | Arg 20 | Ser | Val | Ser | Gly | Met 25 | Glu | Ala | Arg | Glu | Leu 30 | Val | Arg | |
| Leu | Pro | His 35 | Leu | Pro | Ser | Thr | Ala 40 | Cys | Thr | Val | Pro | Thr 45 | His | Leu | Leu | |
| His | Asn 50 | Val | Gln | Leu | Val | Leu 55 | Leu | Pro | Arg | Ala | Pro 60 | Cys | Ile | Gln | Ala | |
| Ala 65 | Lys | His | Lys | Leu | Gly 70 | Glu | Arg | Arg | Pro | Pro 75 | Ala | Arg | Arg | Leu | Gln 80 | |
| Pro | Arg | Asn | Ser | Thr 85 | Ser | Ser | Thr | Leu | Val 90 | Gln | Gly | Ala | Leu | Leu 95 | Glu | |
| Leu | Thr | Phe | Asp 100 | Trp | Phe | Leu | Leu | Gln 105 | Leu | Pro | Lys | Cys | Tyr 110 | Leu | His | |
| Phe | Pro | Leu 115 | Thr | Arg | Arg | Gly | Ser 120 | Trp | Pro | Gln | Thr | Val 125 | Ser | Ser | Ser | |
| Val | Arg 130 | Phe | Leu | Leu | Leu | Gly 135 | Arg | Leu | Leu | Val | Glu 140 | Trp | Ala | Val | Pro | |
| Ala 145 | Pro | Trp | Gly | Ala | Leu 150 | Trp | Ala | Ser | Pro | Gly 155 | Ala | Gly | Arg | Val | Glu 160 | |
| Gly | Arg | Asp | Gly | Gly 165 | His | Arg | Ser | Trp | Glu 170 | Pro | Arg | Leu | Gln | Glu 175 | Lys | |
| Glu | Arg | Gly | | | | | | | | | | | | | | |

<210> 515
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 <212> PRT
 <213> homo sapiens

<400> 515

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| Ser 1 | Gly | Asp | Arg | Trp 5 | Glu | Gly | Met | Glu | Val 10 | Pro | Arg | Gly | Gln | Gly 15 | Gly | |
| Gly | Ala | Pro | Val 20 | Ser | Glu | Ser | Ser | Pro 25 | Ser | Ser | Cys | Pro | Arg 30 | Pro | Ser | |
| Arg | Leu | Cys 35 | Ser | Val | Phe | Pro | Ser 40 | Leu | Ser | His | Arg | His 45 | Gly | Val | Glu | |
| Asp | Gln 50 | Val | Glu | Ala | Gln | Trp 55 | Ala | Ser | Ile | Ser | Pro 60 | Ser | Ser | Ser | Leu | |
| Thr 65 | Asn | Ser | Pro | Cys | Val 70 | Ser | Gly | Leu | Thr | Val 75 | Ala | Leu | Val | Asp | Val 80 | |
| Val | Leu | His | Gln | Ser 85 | His | His | Leu | Leu | Lys 90 | Leu | Val | Leu | Gln | Leu 95 | Cys | |
| Pro | Pro | Gly | Arg 100 | Gly | Val | Gly | Leu | Gln 105 | Arg | Gly | His | Asp | Leu 110 | Arg | Pro | |
| Ile | Pro | Leu 115 | Gly | Val | Leu | Ile | Asn 120 | Leu | Cys | His | Gly | His 125 | Ile | Gly | Val | |

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Leu | Ile | Leu | Val | Phe | Pro | Arg | Leu | Leu | Gly | Gln | Met | Gly | Ile | His |
| | 130 | | | | | 135 | | | | | 140 | | | | |
| Leu | Leu | Leu | Ala | Glu | Arg | Arg | His | Val | Leu | Asp | Leu | Leu | Val | Val | Ala |
| 145 | | | | | 150 | | | | | 155 | | | | | 160 |
| Leu | His | Asp | Leu | Pro | Val | Leu | Arg | Asn | Leu | Leu | Gly | Val | Glu | Glu | Leu |
| | | | | 165 | | | | | 170 | | | | | 175 | |
| Val | Gly | Trp | Arg | Ile | Leu | Ala | Gln | Leu | Gln | Val | Arg | Asp | Gly | Ala | Gly |
| | | | 180 | | | | | 185 | | | | | 190 | | |
| Val | Asp | Glu | Gly | Leu | Arg | Asp | Asp | | | | | | | | |
| | | 195 | | | | | 200 | | | | | | | | |

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 <211> 157
 <212> PRT
 <213> homo sapiens

<400> 516

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|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Thr | Ser | Met | Glu | Ala | Leu | Leu | Phe | Arg | Leu | Phe | Lys | Leu | Pro | Ala | Thr |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Thr | Leu | Arg | Cys | Ile | Gly | Leu | Arg | Arg | Pro | Leu | Val | Thr | His | Thr | Leu |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Arg | Arg | Lys | Cys | Glu | His | Lys | Ala | Ser | Arg | Leu | Cys | His | Gly | Gly | Cys |
| | | 35 | | | | | 40 | | | | | 45 | | | |
| Cys | Cys | Thr | Leu | Glu | Pro | Cys | Val | Gly | Arg | His | Arg | Asp | Trp | Asp | Leu |
| | 50 | | | | | 55 | | | | | 60 | | | | |
| Glu | Arg | Gly | Lys | Ser | Ser | Ala | Lys | Thr | Gly | Gly | Glu | Leu | His | Gly | Arg |
| 65 | | | | | 70 | | | | | 75 | | | | | 80 |
| Arg | Thr | Ala | Ala | Ala | Arg | Gly | Gly | Ser | Glu | Arg | Pro | Val | Leu | Gly | His |
| | | | | 85 | | | | | 90 | | | | | 95 | |
| Arg | Arg | Arg | Asp | Pro | Asp | Ala | Gly | Gly | Leu | Arg | Gly | Gln | Asp | Gly | Glu |
| | | | 100 | | | | | 105 | | | | | 110 | | |
| Ala | Leu | Gln | His | Arg | Gly | Trp | His | Ile | Pro | Gly | Ser | Glu | Thr | Leu | Pro |
| | | 115 | | | | | 120 | | | | | 125 | | | |
| Gly | Arg | Gly | Gly | His | Val | Pro | Trp | Pro | Arg | Pro | Gly | Arg | Arg | His | Pro |
| | 130 | | | | | 135 | | | | | 140 | | | | |
| His | His | Met | Cys | Gly | Phe | Trp | Asp | Ser | Gln | Ser | Leu | Ala | | | |
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<210> 517
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 <212> PRT
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<400> 517

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| Arg | Thr | Arg | Cys | Ala | Gly | Ser | Val | Asn | Thr | Lys | Pro | Pro | Gly | Phe | Val |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Met | Ala | Ala | Ala | Ala | Ala | Arg | Trp | Asn | His | Val | Trp | Val | Gly | Thr | Glu |

| 20 | | | | | | | 25 | | | | | 30 | | | | |
|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|--|
| Thr | Gly | Ile 35 | Leu | Lys | Gly | Val | Asn 40 | Leu | Gln | Arg | Lys | Gln 45 | Ala | Ala | Asn | |
| Phe | Thr 50 | Ala | Gly | Gly | Gln | Pro 55 | Arg | Arg | Glu | Glu | Ala 60 | Val | Ser | Ala | Leu | |
| Cys 65 | Trp | Gly | Thr | Gly | Gly 70 | Glu | Thr | Gln | Met | Leu 75 | Val | Gly | Cys | Ala | Asp 80 | |
| Arg | Thr | Val | Lys | His 85 | Phe | Ser | Thr | Glu | Asp 90 | Gly | Ile | Phe | Gln | Gly 95 | Gln | |
| Arg | His | Cys | Pro 100 | Gly | Gly | Glu | Gly | Met 105 | Phe | Arg | Gly | Leu | Ala 110 | Gln | Ala | |
| Asp | Gly | Thr 115 | Leu | Ile | Thr | Cys | Val 120 | Asp | Ser | Gly | Ile | Leu 125 | Arg | Val | Trp | |
| His | Asp 130 | Lys | Asp | Lys | Asp | Thr 135 | Ser | Ser | Asp | Pro | Leu 140 | Leu | Glu | Leu | Arg | |
| Val 145 | Gly | Pro | Gly | Val | Cys 150 | Arg | Met | Arg | Gln | Asp 155 | Pro | Ala | His | Pro | His 160 | |
| Val | Val | Ala | Thr | Gly 165 | Gly | Lys | Glu | Asn | Ala 170 | Leu | Lys | Ile | Trp | Asp 175 | Leu | |
| Gln | Gly | Ser | Glu 180 | Glu | Pro | Val | Phe | Arg 185 | Ala | Lys | Asn | Val | Arg 190 | Asn | Asp | |
| Trp | Leu | Asp 195 | Leu | Arg | Val | Pro | Ile 200 | Trp | Asp | Gln | Asp | Ile 205 | Gln | Phe | Leu | |
| Pro | Gly 210 | Ser | Gln | Lys | Leu | Val 215 | Thr | Cys | Thr | Gly | Tyr 220 | His | Gln | Val | Arg | |
| Val 225 | Tyr | Asp | Pro | Ala | Ser 230 | Pro | Gln | Arg | Arg | Pro 235 | Val | Leu | Glu | Thr | Thr 240 | |
| Tyr | Gly | Glu | Tyr | Pro 245 | Leu | Thr | Ala | Met | Thr 250 | Leu | Thr | Pro | Gly | Gly 255 | Asn | |
| Ser | Val | Ile | Val 260 | Gly | Asn | Thr | His | Gly 265 | Gln | Leu | Ala | Glu | Ile 270 | Asp | Leu | |
| Arg | Gln | Gly 275 | Arg | Leu | Leu | Gly | Cys 280 | Leu | Lys | Gly | Leu | Ala 285 | Gly | Ser | Val | |
| Arg | Gly 290 | Leu | Gln | Cys | His | Pro 295 | Ser | Lys | Pro | Leu | Leu 300 | Ala | Ser | Cys | Gly | |
| Leu 305 | Asp | Arg | Val | Leu | Arg 310 | Ile | His | Arg | Ile | Gln 315 | Asn | Pro | Arg | Gly | Leu 320 | |
| Glu | His | Lys | Val | Tyr 325 | Leu | Lys | Ser | Gln | Leu 330 | Asn | Cys | Leu | Leu | Leu 335 | Ser | |
| Gly | Arg | Asp | Asn 340 | Trp | Glu | Asp | Glu | Pro 345 | Gln | Glu | Pro | Gln | Glu 350 | Pro | Asn | |
| Lys | Val | Pro | Leu | Glu | Asp | Thr | Glu | Thr | Asp | Glu | Leu | Trp | Ala | Ser | Leu | |

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|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|
| | | 355 | | | | | 360 | | | | | 365 | | | | |
| Glu | Ala | Ala | Ala | Lys | Arg | Lys | Leu | Ser | Gly | Leu | Glu | Gln | Pro | Gln | Gly | |
| | 370 | | | | | 375 | | | | | 380 | | | | | |
| Ala | Leu | Gln | Thr | Arg | Arg | Arg | Lys | Lys | Lys | Arg | Pro | Gly | Ser | Thr | Ser | |
| 385 | | | | | 390 | | | | | 395 | | | | | 400 | |

Pro

<210> 518
 <211> 222
 <212> PRT
 <213> homo sapiens

<400> 518

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| Ser | Trp | Glu | Lys | Leu | Tyr | Val | Leu | Val | Pro | Asp | Gly | Asn | Pro | Gln | Val | |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | | |
| Gln | Pro | Val | Ile | Pro | His | Val | Leu | Gly | Pro | Glu | His | Arg | Phe | Leu | Arg | |
| | | | 20 | | | | | 25 | | | | | 30 | | | |
| Ala | Leu | Gln | Val | Pro | Tyr | Leu | Gln | Ser | Ile | Leu | Phe | Pro | Thr | Cys | Gly | |
| | | 35 | | | | | 40 | | | | | 45 | | | | |
| Asn | His | Met | Gly | Val | Cys | Trp | Val | Leu | Ala | His | Pro | Thr | His | Pro | Arg | |
| | 50 | | | | | 55 | | | | | 60 | | | | | |
| Ala | His | Ser | Gln | Phe | Gln | Glu | Trp | Val | Arg | Gly | Cys | Val | Leu | Val | Leu | |
| 65 | | | | | 70 | | | | | 75 | | | | | 80 | |
| Val | Met | Pro | Asp | Ser | Glu | Asn | Pro | Arg | Ile | His | Thr | Cys | Asp | Glu | Gly | |
| | | | | 85 | | | | | 90 | | | | | 95 | | |
| Ala | Val | Gly | Leu | Gly | Glu | Ala | Thr | Glu | His | Ala | Leu | Pro | Ala | Arg | Ala | |
| | | | 100 | | | | | 105 | | | | | 110 | | | |
| Val | Ser | Leu | Thr | Leu | Glu | Tyr | Ala | Ile | Leu | Gly | Ala | Glu | Val | Leu | His | |
| | | 115 | | | | | 120 | | | | | 125 | | | | |
| Arg | Pro | Val | Arg | Ala | Ala | His | Gln | His | Leu | Gly | Leu | Ala | Ala | Gly | Ala | |
| | 130 | | | | | 135 | | | | | 140 | | | | | |
| Pro | Thr | Gln | Gly | Ala | His | Cys | Leu | Leu | Ala | Pro | Arg | Leu | Ser | Ser | Gly | |
| 145 | | | | | 150 | | | | | 155 | | | | | 160 | |
| Arg | Glu | Val | Arg | Arg | Leu | Phe | Ser | Leu | Lys | Ile | Tyr | Pro | Phe | Gln | Asp | |
| | | | | 165 | | | | | 170 | | | | | 175 | | |
| Pro | Ser | Leu | Gly | Ala | Asp | Pro | His | Met | Val | Pro | Ala | Cys | Ser | Ser | Ser | |
| | | | 180 | | | | | 185 | | | | | 190 | | | |
| Arg | His | Asp | Lys | Ala | Trp | Arg | Leu | Cys | Val | His | Thr | Ser | Gly | Ala | Ala | |
| | | 195 | | | | | 200 | | | | | 205 | | | | |
| Cys | Ala | Ser | Pro | Ala | Gly | Val | Glu | Val | Arg | Cys | Thr | Ala | Val | | | |
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65

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<400> 528

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| Leu 1 | Thr | Tyr | Leu | Phe 5 | Phe | Phe | Phe | Phe | Phe 10 | Phe | Phe | Leu | Gly | Arg 15 | Ser |
| Leu | Gly | Phe | Ile 20 | Arg | Ser | Val | Gly | Thr 25 | Leu | Phe | Arg | Ser | Glu 30 | Ala | Pro |
| Pro | Ser | His 35 | Gly | Val | Gly | Asp | Ser 40 | Gly | Gly | Arg | Gly | Asn 45 | Pro | Ser | Glu |
| His | Pro 50 | Gly | Gly | Cys | Val | Val 55 | Ser | Met | Tyr | Phe | Ala 60 | Leu | Pro | His | Leu |
| Phe 65 | His | Gly | Val | Pro | Cys 70 | Gln | Gly | Gln | Ala | Leu 75 | Ile | Cys | Gly | Glu | Gly 80 |
| Ser | Lys | Gln | Arg | Arg 85 | Arg | Pro | Phe | Arg | Gly 90 | Gly | Glu | Arg | Ala | Val 95 | Ala |
| Pro | Arg | Thr | Pro 100 | Ser | Pro | Ala | His | Asp 105 | Ile | Pro | Glu | Lys | Glu 110 | Thr | Lys |
| Ile | Lys | Pro 115 | Arg | Gly | Leu | Ser | Thr 120 | | | | | | | | |

<210> 529
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 <213> homo sapiens

<400> 529

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| Pro 1 | Leu | Leu | Lys | Gly 5 | Lys | Lys | Leu | Ser | Ala 10 | Ala | Leu | Thr | Asn | Leu 15 | Ser |
| Phe | Phe | Phe | Phe 20 | Phe | Phe | Phe | Phe | Phe 25 | Gly | Lys | Lys | Pro | Trp 30 | Leu | Tyr |
| Ser | Leu | Cys 35 | Gly | Asp | Thr | Val | Pro 40 | Phe | Arg | Gly | Pro | Ser 45 | Gln | Pro | Trp |
| Gly | Gly 50 | Gly | Gln | Trp | Trp | Ala 55 | Trp | Glu | Ser | Gln | Arg 60 | Ala | Ser | Trp | Arg |
| Val 65 | Arg | Arg | Leu | His | Val 70 | Phe | Cys | Ser | Ser | Pro 75 | Ser | Phe | Pro | Trp | Gly 80 |
| Pro | Leu | Pro | Gly | Ser 85 | Ser | Thr | Asn | Met | Trp 90 | | | | | | |

<210> 530

<211> 96

<212> PRT

<213> homo sapiens

<400> 530

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| Asn 1 | Lys | Ala | Pro | Gly 5 | Pro | Phe | Tyr | Val | Gly 10 | Ala | Pro | Leu | Lys | Tyr 15 | Gly |
| Met | Val | Val | Gly 20 | Arg | Glu | Ala | Val | Ala 25 | Gln | Gln | Ser | Leu | Ser 30 | Pro | Asp |
| Tyr | Gln | Leu 35 | Trp | Gly | Gly | Phe | Gln 40 | Gly | Ala | Arg | Ser | Arg 45 | Leu | Gly | Ser |
| Ser 50 | Ser | His | Arg | His | Val | Gly 55 | Gly | Gly | Arg | Lys | Tyr 60 | Leu | Gln | Gly | Gly |
| Thr 65 | Val | Ser | Glu | Glu | Gln 70 | Asp | Gly | Arg | Gly | Phe 75 | Ser | Ala | Cys | Tyr | Gly 80 |
| Ile | Leu | Phe | Lys | Glu 85 | Met | Gly | Val | Lys | Pro 90 | Gly | Thr | Val | Ala | His 95 | Ala |

<210> 531

<211> 497

<212> PRT

<213> homo sapiens

<400> 531

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| Thr 1 | Pro | Ala | Leu | Val 5 | Gln | Arg | Phe | Arg | Glu 10 | Gly | Gly | Ser | Gly | Ala 15 | Pro |
| Glu | Gln | Ala | Glu 20 | Cys | Val | Glu | Leu | Leu 25 | Leu | Ala | Leu | Gly | Glu 30 | Pro | Ala |
| Glu | Glu | Leu 35 | Cys | Glu | Glu | Phe | Leu 40 | Ala | His | Ala | Arg | Gly 45 | Arg | Leu | Glu |
| Lys 50 | Glu | Leu | Arg | Asn | Leu | Glu 55 | Ala | Glu | Leu | Gly | Pro 60 | Ser | Pro | Pro | Ala |

| | | | | | | | | | | | | | | | |
|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Pro 65 | Asp | Val | Leu | Glu | Phe 70 | Thr | Asp | His | Gly | Gly 75 | Ser | Gly | Phe | Val | Gly 80 |
| Gly | Leu | Cys | Gln | Val 85 | Ala | Ala | Ala | Tyr | Gln 90 | Glu | Leu | Phe | Ala | Ala 95 | Gln |
| Gly | Pro | Ala | Gly 100 | Ala | Glu | Lys | Leu | Ala 105 | Ala | Phe | Ala | Arg | Gln 110 | Leu | Gly |
| Ser | Arg | Tyr 115 | Phe | Ala | Leu | Val | Glu 120 | Arg | Arg | Leu | Ala | Gln 125 | Glu | Gln | Gly |
| Gly | Gly 130 | Asp | Asn | Ser | Leu | Leu 135 | Val | Arg | Ala | Leu | Asp 140 | Arg | Phe | His | Arg |
| Arg 145 | Leu | Arg | Ala | Pro | Gly 150 | Ala | Leu | Leu | Ala | Ala 155 | Ala | Gly | Leu | Ala | Asp 160 |
| Ala | Ala | Thr | Glu | Ile 165 | Val | Glu | Arg | Val | Ala 170 | Arg | Glu | Arg | Leu | Gly 175 | His |
| His | Leu | Gln | Gly 180 | Leu | Arg | Ala | Ala | Phe 185 | Leu | Gly | Cys | Leu | Thr 190 | Asp | Val |
| Arg | Gln | Ala 195 | Leu | Ala | Ala | Pro | Arg 200 | Val | Ala | Gly | Lys | Glu 205 | Gly | Pro | Gly |
| Leu | Ala 210 | Glu | Leu | Leu | Ala | Asn 215 | Val | Ala | Ser | Ser | Ile 220 | Leu | Ser | His | Ile |
| Lys 225 | Ala | Ser | Leu | Ala | Ala 230 | Val | His | Leu | Phe | Thr 235 | Ala | Lys | Glu | Val | Ser 240 |
| Phe | Ser | Asn | Lys | Pro 245 | Tyr | Phe | Arg | Gly | Glu 250 | Phe | Cys | Ser | Gln | Gly 255 | Val |
| Arg | Glu | Gly | Leu 260 | Ile | Val | Gly | Phe | Val 265 | His | Ser | Met | Cys | Gln 270 | Thr | Ala |
| Gln | Ser | Phe 275 | Cys | Asp | Ser | Pro | Gly 280 | Glu | Lys | Gly | Gly | Ala 285 | Thr | Pro | Pro |
| Ala | Leu 290 | Leu | Leu | Leu | Leu | Ser 295 | Arg | Leu | Cys | Leu | Asp 300 | Tyr | Glu | Thr | Ala |
| Thr 305 | Ile | Ser | Tyr | Ile | Leu 310 | Thr | Leu | Thr | Asp | Glu 315 | Gln | Phe | Leu | Val | Gln 320 |
| Asp | Gln | Phe | Pro | Val 325 | Thr | Pro | Val | Ser | Thr 330 | Leu | Cys | Ala | Glu | Ala 335 | Arg |
| Glu | Thr | Ala | Arg 340 | Arg | Leu | Leu | Thr | His 345 | Tyr | Val | Lys | Val | Gln 350 | Gly | Leu |
| Val | Ile | Ser 355 | Gln | Met | Leu | Arg | Lys 360 | Ser | Val | Glu | Thr | Arg 365 | Asp | Trp | Leu |
| Ser | Thr 370 | Leu | Glu | Pro | Arg | Asn 375 | Val | Arg | Ala | Val | Met 380 | Lys | Arg | Val | Val |
| Glu 385 | Asp | Thr | Thr | Ala | Ile 390 | Asp | Val | Gln | Val | Gly 395 | Leu | Leu | Tyr | Glu | Glu 400 |

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| Gly | Val | Arg | Lys | Ala 405 | Gln | Ser | Ser | Asp | Ser 410 | Ser | Lys | Arg | Thr | Phe 415 | Ser |
| Val | Tyr | Ser | Ser 420 | Ser | Arg | Gln | Gln | Gly 425 | Arg | Tyr | Ala | Pro | Ser 430 | Tyr | Thr |
| Pro | Ser | Ala 435 | Pro | Met | Asp | Thr | Asn 440 | Leu | Leu | Ser | Asn 445 | Ile | Gln | Lys | Leu |
| Phe | Ser 450 | Glu | Arg | Ile | Asp | Val 455 | Phe | Ser | Pro | Val | Glu 460 | Phe | Asn | Lys | Val |
| Ser 465 | Val | Leu | Thr | Gly | Ile 470 | Ile | Lys | Ile | Ser | Leu 475 | Lys | Thr | Leu | Ala | Gly 480 |
| Ser | Val | Cys | Gly | Leu 485 | Arg | Thr | Phe | Leu | Ala 490 | Leu | Cys | Gly | Leu | Gln 495 | Gln |

Gly

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 <212> PRT
 <213> homo sapiens

<400> 532

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| Cys 1 | Gly | Ser | Gly | Trp 5 | Ser | Trp | Pro | His | Trp 10 | Pro | Ala | Thr | Arg | Pro 15 | Gly |
| Gln | Gly | Pro | Pro 20 | Ser | Gln | Pro | Arg | Glu 25 | Val | Leu | Pro | Ala | Pro 30 | Gly | Gly |
| Arg | Leu | Ser 35 | Gly | Ser | Pro | Gly | Arg 40 | Pro | Pro | Gly | Asp 45 | Pro | Ala | Gly | Gly |
| Gly | Pro 50 | Gly | Ala | Arg | Gly | Pro 55 | Leu | Val | Pro | Arg | Ser 60 | Pro | Trp | Gln | Arg |
| Leu 65 | Arg | Ala | Arg | Gln | Arg 70 | Pro | Ala | Gly | Pro | Arg 75 | Glu | Pro | Ala | Ser | Ala 80 |
| Gly | Gly | Ser | Gly | Pro 85 | Ala | Pro | Ala | Pro | Ala 90 | Val | Ser | Cys | His 95 | His | His |
| Pro | Ala | Pro | Ala 100 | Pro | Ala | Ala | Ala | Pro 105 | Pro | Ala | Gln | Asn 110 | Ser | Gly | Cys |
| Pro | Ala | Ala 115 | Gly | Arg | Arg | Pro | Pro 120 | Ala | Ser | Arg | His 125 | Leu | Leu | Gly | Pro |
| Gly | Pro 130 | Gln | Thr | Ala | Pro | Gly 135 | Arg | Pro | Pro | Pro | Pro 140 | Gly | Arg | Gly | Arg |
| Pro 145 | Arg | Ser | His | Cys | Leu 150 | His | Gly | Arg | | | | | | | |

<210> 533
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<400> 533

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|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Tyr 1 | Asp | Gln | Ala | Leu 5 | His | Leu | His | Val | Val 10 | Gly | Gln | Gln | Pro | Pro 15 | Arg |
| Arg | Phe | Pro | Gly 20 | Leu | Cys | Thr | Gln | Arg 25 | Ala | His | Gly | Arg | His 30 | Trp | Glu |
| Leu | Ile | Leu 35 | His | Gln | Lys | Leu | Phe 40 | Ile | Ser | Glu | Ser | Glu 45 | Asp | Val | Gly |
| Asp | Gly 50 | Gly | Arg | Leu | Val | Val 55 | Gln | Ala | Glu | Ala | Gly 60 | Glu | Gln | Gln | Glu |
| Gln 65 | Gly | Arg | Trp | Cys | Gly 70 | Thr | Pro | Leu | Leu | Pro 75 | Arg | Ala | Val | Ala | Glu 80 |
| Ala | Leu | Ser | Arg | Leu 85 | Ala | His | Arg | Val | Asp 90 | Glu | Ala | His | Asp | Glu 95 | Ala |
| Leu | Thr | Asp | Thr 100 | Leu | Thr | Ala | Glu | Leu 105 | Thr | Pro | Glu | Val | Gly 110 | Leu | Val |
| Gly | Glu | Gly 115 | His | Leu | Phe | Gly | Gly 120 | Glu | Lys | Val | His | Cys 125 | Cys | Gln | Arg |
| Gly | Leu 130 | Asn | Val | Ala | Gln | Asp 135 | Gly | Ala | Gly | His | Ile 140 | Gly | Gln | Gln | Leu |
| Gly 145 | Gln | Ala | Arg | Ala | Leu 150 | Leu | Pro | Ser | His | Ala 155 | Arg | Cys | Cys | Gln | Arg 160 |
| Leu | Ala | Asp | Val | Cys 165 | Gln | Ala | Ala | Gln | Glu 170 | Gly | Arg | Pro | Glu | Thr 175 | Leu |
| Gln | Val | Val | Ala 180 | Gln | Ala | Leu | Ala | Gly 185 | His | Ser | Phe | His | Asp 190 | Leu | Arg |
| Gly | Ser | Val 195 | Cys | Glu | Pro | Gly | Ser 200 | Gly | Gln | Gln | Gly | Pro 205 | Gly | Ser | Pro |
| Gln | Ala 210 | Pro | Val | Glu | Ala | Val 215 | Gln | Arg | Pro | His | Gln 220 | Gln | | | |

<210> 534

<211> 52

<212> PRT

<213> homo sapiens

<400> 534

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| Pro 1 | Ser | Ile | Leu | Ile 5 | Pro | Met | Thr | Pro | Gly 10 | Gly | Phe | Phe | Ser | Val 15 | Met |
| Val | Arg | Ala | Lys 20 | Thr | Gly | Ser | Thr | His 25 | Arg | Cys | Ser | Pro | Ala 30 | Val | Tyr |
| Pro | Leu | Met 35 | Arg | Arg | Ile | Pro | Cys 40 | Trp | Arg | Ile | Leu | Ile 45 | Gly | Arg | Gln |
| Glu | Thr 50 | Thr | Gly | | | | | | | | | | | | |

<210> 535

<211> 38
 <212> PRT
 <213> homo sapiens

<400> 535

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|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Gly | Lys | Lys | Pro | Pro | Ala | Ser | His | His | Lys | Glu | Ser | Gly | Cys | Pro |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Ser | Arg | Pro | Ser | Pro | Thr | Gly | His | Ser | Thr | Pro | Pro | Ser | Asp | Pro | Leu |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Thr | Asp | Asn | Ser | Val | Trp | | | | | | | | | | |
| | | 35 | | | | | | | | | | | | | |

<210> 536
 <211> 55
 <212> PRT
 <213> homo sapiens

<400> 536

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|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ser | Gly | Cys | Val | Pro | Ser | His | Glu | Glu | Asp | Ser | Met | Leu | Glu | Asp | Ser |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| His | Arg | Gln | Ala | Arg | Asn | His | Arg | Leu | Val | Ile | Ile | Arg | Asn | Pro | Val |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Val | His | Leu | Gly | Gln | Ala | Pro | Leu | Ala | Thr | Pro | His | Arg | Pro | Gln | Ile |
| | | 35 | | | | | 40 | | | | | 45 | | | |
| Arg | Ser | Leu | Thr | Ile | Gln | Ser | | | | | | | | | |
| | 50 | | | | | 55 | | | | | | | | | |

<210> 537
 <211> 113
 <212> PRT
 <213> homo sapiens

<400> 537

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|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Thr | Arg | Gly | Pro | Arg | Lys | Arg | Leu | Arg | Arg | Ser | Gly | Arg | Arg | Gly | Gly |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Leu | Arg | Ser | Trp | Ala | Gly | Arg | Glu | Arg | Val | Leu | Gly | Thr | Ala | Leu | Leu |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Gly | Ile | Tyr | Ile | Val | Phe | Pro | Arg | Ile | Pro | Gly | Ser | Gly | Ser | Glu | Glu |
| | | 35 | | | | | 40 | | | | | 45 | | | |
| Ala | Val | Thr | Pro | Tyr | Asp | Arg | Arg | Asp | Leu | Asp | Ser | Arg | Asn | Ser | Pro |
| | 50 | | | | | 55 | | | | | 60 | | | | |
| Gln | Ala | Pro | Ala | Gly | Gln | Ser | Thr | Thr | Ser | Ser | Ser | Phe | Cys | Phe | Cys |
| 65 | | | | | 70 | | | | 75 | | | | | | 80 |
| Asp | Gly | Leu | Glu | Ser | Arg | Gly | Leu | Lys | His | Thr | Val | Ser | Ile | Asp | Cys |
| | | | | 85 | | | | | 90 | | | | | 95 | |
| Ile | Arg | Phe | Val | Gln | Lys | Pro | Gly | Gln | Leu | Thr | Glu | Ser | His | Phe | Leu |
| | | | 100 | | | | | 105 | | | | | 110 | | |

Ala

<210> 538
 <211> 101
 <212> PRT
 <213> homo sapiens

<400> 538

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|-----------|-----------|-----------|------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Glu 1 | Pro | Ala | Asp | Ser 5 | Gln | Ala | Arg | Gly | Arg 10 | Gln | Cys | Leu | Leu | Leu 15 | Leu |
| His | Gln | Val | Gln 20 | Gly | Ile | Trp | Leu | Lys 25 | Ala | Cys | Ile | Phe | Pro 30 | Gly | His |
| Lys | Leu | Pro 35 | Glu | Pro | Leu | Lys | Trp 40 | Glu | Ala | Arg | Gln | Phe 45 | Gln | Thr | Asn |
| Leu | Phe 50 | Ser | Thr | His | His | Ser 55 | Thr | Phe | Lys | Val | Cys 60 | Leu | Leu | Leu | Leu |
| Pro 65 | Val | His | Pro | Pro | Ser 70 | Leu | Gln | Phe | Phe | His 75 | Ser | Leu | Thr | Ser | Glu 80 |
| Arg | Val | Pro | Gly | Gly 85 | Ser | Met | Val | Asn | Lys 90 | Leu | Thr | Cys | Met | Leu 95 | Gln |
| Lys | Lys | Lys | Lys 100 | Lys | | | | | | | | | | | |

<210> 539
 <211> 198
 <212> PRT
 <213> homo sapiens

<400> 539

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|-----------|------------|------------|------------|-----------|-----------|------------|------------|------------|-----------|-----------|------------|------------|------------|-----------|-----------|
| Tyr 1 | Ser | Leu | Cys | Ser 5 | Gln | Cys | Val | Ser | Ala 10 | Pro | Leu | Thr | Leu | Asn 15 | Arg |
| His | Arg | Ser | Arg 20 | Arg | Lys | Arg | Lys | Trp 25 | Trp | Ile | Ala | Gln | Leu 30 | Glu | Pro |
| Gly | Asp | Cys 35 | Tyr | Asp | Cys | Leu | Asp 40 | Leu | Cys | Gly | His | Arg 45 | Ala | Ser | Gln |
| Pro | Pro 50 | Gln | Thr | Leu | Ser | Leu 55 | Glu | Cys | Gly | Gly | Thr 60 | Gln | Cys | Arg | Phe |
| Pro 65 | Gly | Gly | Leu | Ser | Pro 70 | Arg | Pro | Ser | Pro | Cys 75 | Pro | Pro | Ser | Ser | Ser 80 |
| Gly | Leu | Leu | Phe | Tyr 85 | Arg | Phe | Phe | Leu | Val 90 | Ser | Phe | Leu | Gly | Leu 95 | Leu |
| Phe | Thr | Glu | Gly 100 | Thr | Ala | Ala | Leu | Gly 105 | Phe | Leu | Val | Thr | Ser 110 | Ala | Leu |
| Leu | Gly | Ser 115 | Asp | Gly | Ser | Ala | Ser 120 | Ala | Ser | Trp | Asp | Leu 125 | Gly | Met | Gly |
| Thr | Met 130 | Met | Ala | Ser | Thr | Gln 135 | Met | Ser | Trp | Lys | Met 140 | Ala | Pro | Arg | Lys |

| | | | | | | | | | | | | | | | |
|------------|-----|------------|------------|------------|------------|-----|-----|------------|------------|------------|-----|-----|------------|------------|------------|
| Ser 145 | Pro | Tyr | Arg | Ser | Arg 150 | Phe | Ser | Arg | Lys | Val 155 | Gly | Ser | Gly | Thr | Ser 160 |
| Gly | Gly | Glu | Lys | Ser 165 | Arg | Ser | Glu | Ala | Met 170 | Ala | Gln | Val | Ala | Cys 175 | Cys |
| Leu | Thr | Ser | Leu 180 | Leu | Thr | His | His | Ser 185 | Leu | Glu | Pro | Thr | Pro 190 | Ala | Pro |
| Pro | Arg | Arg 195 | Ser | Pro | Arg | | | | | | | | | | |

<210> 540
 <211> 147
 <212> PRT
 <213> homo sapiens

<400> 540

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|------------|------------|------------|------------|-----------|-----------|------------|------------|------------|-----------|-----------|------------|------------|------------|-----------|-----------|
| Lys 1 | Lys | Asn | Ser | Ser 5 | Ala | Leu | Ile | Phe | Leu 10 | Glu | Glu | Ala | Ala | Asp 15 | Phe |
| Gly | Cys | Gln | Ile 20 | Ser | Leu | Arg | Asn | Gly 25 | His | Phe | Leu | Arg | Cys 30 | Phe | Phe |
| Leu | Thr | Glu 35 | Ser | Val | Asp | Lys | Leu 40 | Ile | Lys | Arg | Leu | Ser 45 | His | Phe | Lys |
| Ile | Thr 50 | Pro | Lys | Ser | Ser | Ser 55 | Thr | Val | Phe | Phe | Phe 60 | Phe | Ser | Phe | Cys |
| Phe 65 | Lys | Ile | Thr | Asn | Gln 70 | Val | Arg | Ser | Pro | Thr 75 | Ser | Ser | Ser | Met | Asn 80 |
| Ser | Phe | Val | Thr | Glu 85 | Leu | Leu | Ser | Val | Cys 90 | Ser | Pro | His | Cys | Ala 95 | Leu |
| Asn | Thr | Val | Ser 100 | Ala | Ala | Pro | Val | Cys 105 | Pro | Leu | Phe | Arg | Lys 110 | Glu | Ser |
| Ile | Phe | Asn 115 | Thr | Phe | Thr | Ile | Cys 120 | Thr | Pro | Trp | Asn | Leu 125 | His | Met | Leu |
| Thr | Ser 130 | Tyr | Tyr | Lys | Pro | Thr 135 | His | Pro | Gln | Leu | Ser 140 | Ser | Gly | Thr | Gly |
| His 145 | Pro | Leu | | | | | | | | | | | | | |

<210> 541
 <211> 138
 <212> PRT
 <213> homo sapiens

<400> 541

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| Lys 1 | Asn | Asp | Arg | Phe 5 | Pro | Trp | Thr | Ser | Leu 10 | Pro | Gly | Leu | Lys | Gly 15 | Ala |
| Leu | Ile | Lys | Leu 20 | Phe | Thr | Glu | His | Val 25 | Ala | Glu | Lys | His | Ile 30 | Tyr | Gly |
| Leu | Met | Pro | Leu | Leu | Leu | Glu | Ala | Gln | Ser | Thr | Pro | Phe | Gln | Val | Thr |

| | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|
| | | 35 | | | | | 40 | | | | | 45 | | | | |
| Pro | Ser | Thr | Met | Ala | Asn | Ile | Val | Lys | Gly | Leu | Tyr | Thr | Leu | Arg | Pro | |
| | 50 | | | | | 55 | | | | | 60 | | | | | |
| Glu | Trp | Val | Gln | Met | Ala | Pro | Thr | Leu | Phe | Ser | Lys | Phe | Ile | Pro | Asn | |
| 65 | | | | | 70 | | | | | 75 | | | | | 80 | |
| Ile | Leu | Pro | Pro | Ala | Val | Glu | Ser | Glu | Leu | Ser | Glu | Tyr | Ala | Ala | Gln | |
| | | | | 85 | | | | | 90 | | | | | 95 | | |
| Asp | Gln | Lys | Phe | Gln | Arg | Glu | Leu | Ile | Gln | Asn | Gly | Phe | Thr | Arg | Gly | |
| | | | 100 | | | | | 105 | | | | | 110 | | | |
| Asp | Gln | Ser | Arg | Lys | Arg | Ala | Gly | Asp | Glu | Leu | Ala | Tyr | Asn | Ser | Ser | |
| | | 115 | | | | | 120 | | | | | 125 | | | | |
| Ser | Ala | Cys | Ala | Ser | Ser | Arg | Gly | Tyr | Arg | | | | | | | |
| | 130 | | | | | 135 | | | | | | | | | | |

<210> 542
 <211> 179
 <212> PRT
 <213> homo sapiens

<400> 542

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|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|
| Lys | Ala | Cys | Ile | Pro | Ser | Asp | Gln | Ser | Gly | Phe | Arg | Trp | Leu | Gln | Leu | |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | | |
| Tyr | Phe | Leu | Asn | Leu | Phe | Gln | Thr | Phe | Ser | Leu | Arg | Arg | Trp | Asn | Leu | |
| | | | 20 | | | | | 25 | | | | | 30 | | | |
| Asn | Phe | Leu | Asn | Met | Leu | Leu | Lys | Ile | Arg | Asn | Phe | Lys | Glu | Asn | Leu | |
| | | 35 | | | | | 40 | | | | | 45 | | | | |
| Tyr | Arg | Met | Val | Leu | Gln | Gly | Val | Thr | Ser | Pro | Gly | Arg | Glu | Leu | Gly | |
| | 50 | | | | | 55 | | | | | 60 | | | | | |
| Met | Ser | Trp | Leu | Ile | Ile | Ala | Arg | Gln | His | Val | Gln | Val | Pro | Gly | Gly | |
| 65 | | | | | 70 | | | | | 75 | | | | | 80 | |
| Thr | Asp | Ser | Glu | Cys | Ile | Glu | Tyr | Ala | Phe | Leu | Pro | Glu | Lys | Arg | Thr | |
| | | | | 85 | | | | | 90 | | | | | 95 | | |
| His | Trp | Ser | Cys | Arg | Asp | Cys | Ile | Gln | Ser | Thr | Val | Gly | Ala | Ala | His | |
| | | | 100 | | | | | 105 | | | | | 110 | | | |
| Thr | Gln | Glu | Leu | Cys | His | Lys | Ala | Val | His | Gly | Arg | Gly | Cys | Trp | Thr | |
| | | 115 | | | | | 120 | | | | | 125 | | | | |
| Ser | Tyr | Leu | Val | Cys | Asn | Phe | Lys | Thr | Lys | Thr | Lys | Lys | Lys | Lys | Asn | |
| | 130 | | | | | 135 | | | | | 140 | | | | | |
| Ser | Ala | Ala | Arg | Leu | Gly | Gly | Asp | Phe | Glu | Met | Gly | Gln | Ser | Phe | Asn | |
| 145 | | | | | 150 | | | | | 155 | | | | | 160 | |
| Glu | Phe | Ile | Tyr | Arg | Phe | Cys | Glu | Glu | Lys | Ala | Ser | Gln | Lys | Val | Thr | |
| | | | | 165 | | | | | 170 | | | | | 175 | | |

Ile Ser Lys

<210> 543

<211> 92
 <212> PRT
 <213> homo sapiens

<400> 543

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| Ile | Gln | Phe | Leu | Glu | Ala | Ala | Phe | Ala | Val | Phe | Leu | His | Cys | Met | Arg |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Phe | Gly | Asn | Glu | Cys | Arg | Asn | Leu | Leu | Trp | Ala | Phe | Thr | Phe | Leu | Cys |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Gln | Phe | Gly | Phe | Tyr | Cys | Leu | Asn | Leu | Met | Leu | Thr | Trp | Arg | Gly | Asp |
| | | 35 | | | | | 40 | | | | | 45 | | | |
| Gly | Gly | Gln | Cys | Cys | Cys | Gly | Ala | Ser | Ser | Glu | Ser | Val | Cys | Gly | Glu |
| | 50 | | | | | 55 | | | | | 60 | | | | |
| Leu | Cys | Cys | Ala | Asp | Val | Ala | Val | Gly | Gly | Gln | Val | Arg | Gly | Ser | Ala |
| 65 | | | | | 70 | | | | | 75 | | | | | 80 |
| Pro | Ser | Trp | Lys | Lys | Ser | Cys | Leu | Arg | Val | Tyr | Val | | | | |
| | | | | 85 | | | | | 90 | | | | | | |

<210> 544
 <211> 99
 <212> PRT
 <213> homo sapiens

<400> 544

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|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Lys | Pro | Asn | Trp | His | Arg | Lys | Val | Asn | Ala | His | Ser | Lys | Phe | Leu | His |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Ser | Phe | Pro | Asn | Arg | Ile | Gln | Cys | Lys | Lys | Thr | Ala | Lys | Ala | Ala | Ser |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Arg | Asn | Cys | Ile | Tyr | Trp | Pro | Leu | Pro | Glu | Gln | Gln | Ala | Ala | Met | Pro |
| | | 35 | | | | | 40 | | | | | 45 | | | |
| Ala | Pro | Trp | Pro | Pro | Glu | Leu | Asp | Ala | Cys | Cys | Ala | Asp | Val | Leu | Thr |
| | 50 | | | | | 55 | | | | | 60 | | | | |
| Leu | Met | Arg | Met | Leu | Gly | Tyr | Gly | Ser | Asp | Ser | Glu | Glu | Ile | His | Leu |
| 65 | | | | | 70 | | | | | 75 | | | | | 80 |
| Ser | Tyr | Ser | Ser | Leu | Glu | Arg | Ser | Ser | Cys | Val | Phe | Asn | Met | Lys | His |
| | | | | 85 | | | | | 90 | | | | | 95 | |
| Phe | Ile | Trp | | | | | | | | | | | | | |

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 <211> 96
 <212> PRT
 <213> homo sapiens

<400> 545

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| Gln | Ser | Gln | Asn | Thr | Lys | Val | Phe | Val | Pro | Ile | Arg | Ile | Tyr | Thr | Asp |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Pro | Leu | Thr | Lys | Val | Leu | Leu | Ile | Met | Gln | Phe | Ala | Ser | Ser | Pro | Ser |
| | | | 20 | | | | | 25 | | | | | 30 | | |

| | | | | | | | | | | | | | | | |
|-----------|-----------|-----------|-----|-----------|-----------|-----------|-----------|-----|-----------|-----------|-----------|-----------|-----|-----------|-----------|
| Ser | Trp | Leu 35 | Gly | Ser | Ser | Pro | Ile 40 | Trp | His | Asp | His | Ile 45 | Lys | Arg | Thr |
| Pro | Ser 50 | Asp | Met | Ile | Ser | Ser 55 | Lys | Lys | Val | Pro | Ser 60 | Leu | Leu | Pro | Asp |
| His 65 | Gln | Arg | Pro | His | Gln 70 | His | Asn | Thr | Thr | Leu 75 | Arg | Ile | Gln | Ile | His 80 |
| Cys | Trp | Pro | His | Asn 85 | Ser | Thr | Val | Pro | His 90 | Leu | Leu | Ser | Arg | Ser 95 | Ala |

<210> 546
 <211> 108
 <212> PRT
 <213> homo sapiens

<400> 546

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| Gly 1 | Arg | Asp | Ala | Gly 5 | Gln | Ser | Glu | Pro | Trp 10 | Leu | Ser | Thr | Ser | Gly 15 | Cys |
| Cys | Ala | Trp | Gly 20 | Gly | Cys | Ala | Pro | Gly 25 | Ala | Arg | Gly | Cys | Trp 30 | Gly | Pro |
| Gly | Pro | Pro 35 | Ser | Leu | Gly | Val | Gly 40 | Arg | Lys | Pro | Gly | Cys 45 | Arg | Val | Ser |
| Ala | Ser 50 | Ser | Val | Pro | Glu | Arg 55 | Trp | Ile | Ala | Trp | Ser 60 | Pro | Arg | Pro | Ser |
| Glu 65 | Ala | Ser | Ala | Thr | Phe 70 | Arg | Gly | Ala | Pro | Lys 75 | Ser | Ile | Leu | Thr | Ala 80 |
| Arg | Leu | Trp | Ala | Ser 85 | Ala | Trp | Arg | Pro | Gln 90 | His | Arg | Gly | Ser | Gln 95 | Asn |
| Glu | Arg | Pro | Trp 100 | Ser | Ser | Ser | Met | Lys 105 | Thr | Ser | Gly | | | | |

<210> 547
 <211> 117
 <212> PRT
 <213> homo sapiens

<400> 547

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|-----------|-----|-----------|-----------|----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Pro 1 | Gly | Arg | Arg | Ala 5 | Lys | Arg | Ala | Met | Ala 10 | Val | Tyr | Val | Gly | Met 15 | Leu |
| Arg | Leu | Gly | Arg 20 | Leu | Cys | Ala | Gly | Ser 25 | Ser | Gly | Val | Leu | Gly 30 | Ala | Arg |
| Ala | Ala | Leu 35 | Ser | Arg | Ser | Trp | Gln 40 | Glu | Ala | Arg | Leu | Gln 45 | Gly | Val | Arg |
| Phe 50 | Leu | Ser | Ser | Arg | Glu | Val 55 | Asp | Arg | Met | Val | Ser 60 | Thr | Pro | Ile | Gly |
| Gly 65 | Leu | Ser | Tyr | Val | Gln 70 | Gly | Cys | Thr | Lys | Lys 75 | His | Leu | Asn | Ser | Lys 80 |

| | | | | | | | | | | | | | | | |
|-----|-----|------------|------------|-----------|-----|-----|-----|------------|-----------|-----|-----|-----|------------|-----------|-----|
| Thr | Val | Gly | Gln | Cys 85 | Leu | Glu | Thr | Thr | Ala 90 | Gln | Arg | Val | Pro | Glu 95 | Arg |
| Glu | Ala | Leu | Val 100 | Val | Leu | His | Glu | Asp 105 | Val | Arg | Leu | Thr | Phe 110 | Ala | Gln |
| Leu | Lys | Glu 115 | Glu | Trp | | | | | | | | | | | |

<210> 548
 <211> 117
 <212> PRT
 <213> homo sapiens

<400> 548

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| Pro 1 | Leu | Leu | Leu | Glu 5 | Leu | Gly | Lys | Gly | Gln 10 | Pro | Asp | Val | Phe | Met 15 | Glu |
| Asp | Asp | Gln | Gly 20 | Leu | Ser | Phe | Trp | Asp 25 | Pro | Leu | Cys | Cys | Gly 30 | Leu | Gln |
| Ala | Leu | Ala 35 | His | Ser | Leu | Ala | Val 40 | Lys | Met | Leu | Phe | Gly 45 | Ala | Pro | Leu |
| Asn 50 | Val | Ala | Glu | Ala | Ser | Asp 55 | Gly | Arg | Gly | Asp | His 60 | Ala | Ile | His | Leu |
| Ser 65 | Gly | Thr | Glu | Glu | Ala 70 | Asp | Thr | Leu | Gln | Pro 75 | Gly | Phe | Leu | Pro | Thr 80 |
| Pro | Arg | Glu | Gly | Gly 85 | Pro | Gly | Pro | Gln | His 90 | Pro | Arg | Ala | Pro | Gly 95 | Ala |
| Gln | Pro | Pro | Gln 100 | Ala | Gln | His | Pro | Asp 105 | Val | Asp | Ser | His | Gly 110 | Ser | Leu |
| Cys | Pro | Ala 115 | Ser | Arg | | | | | | | | | | | |

<210> 549
 <211> 68
 <212> PRT
 <213> homo sapiens

<400> 549

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| Arg 1 | Leu | Ser | Gly | Pro 5 | Ala | Ala | Asn | Pro | Arg 10 | Gly | Ala | Ala | Gly | Trp 15 | Arg |
| Ala | Ala | Gly | Ala 20 | Gln | Glu | Leu | Gly | Met 25 | Ser | Tyr | Lys | Pro | Met 30 | Arg | Pro |
| Trp | Leu | Pro 35 | Ser | Ser | Thr | Pro | Trp 40 | Ser | Ala | Arg | His | Pro 45 | Leu | Gly | Pro |
| Gly 50 | Ala | Pro | Arg | Phe | Pro | Asp 55 | Arg | Glu | Ala | Cys | Ala 60 | Cys | Ala | Val | Arg |
| Gly 65 | Cys | Ser | Val | | | | | | | | | | | | |

<210> 550

<211> 68
 <212> PRT
 <213> homo sapiens

<400> 550

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|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gly | His | Cys | Ser | Pro | Ala | Arg | Arg | Thr | Arg | Thr | Pro | Pro | Cys | Gln | Gly |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Thr | Gly | Val | Pro | Arg | Ala | Pro | Gly | Gly | Ala | Trp | Gln | Thr | Arg | Gly | Cys |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Cys | Trp | Ala | Ala | Arg | Gly | Ala | Trp | Val | Cys | Arg | Thr | Ser | Pro | Thr | Pro |
| | | 35 | | | | | 40 | | | | | 45 | | | |
| Gly | Arg | Gln | Arg | His | Ala | Ser | Arg | Pro | Leu | Leu | Gly | Gly | Trp | Leu | Arg |
| | 50 | | | | | 55 | | | | | 60 | | | | |
| Gly | Arg | Ser | Ala | | | | | | | | | | | | |
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<210> 551
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 <212> PRT
 <213> homo sapiens

<400> 551

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|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Asp | Thr | Ala | Ala | Pro | His | Gly | Ala | Arg | Ala | Arg | Leu | Pro | Val | Arg | Glu |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Pro | Gly | Cys | Pro | Gly | Pro | Gln | Gly | Val | Pro | Gly | Arg | Pro | Gly | Gly | Ala |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Ala | Gly | Gln | Pro | Gly | Ala | His | Gly | Phe | Val | Gly | His | Pro | Gln | Leu | Leu |
| | | 35 | | | | | 40 | | | | | 45 | | | |
| Gly | Ala | Ser | Gly | Thr | Pro | Ala | Gly | Arg | Ser | Ser | Gly | Val | Gly | Cys | Gly |
| | 50 | | | | | 55 | | | | | 60 | | | | |
| Ala | Ala | Gln | Pro | | | | | | | | | | | | |
| 65 | | | | | | | | | | | | | | | |

<210> 552
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 <212> PRT
 <213> homo sapiens

<400> 552

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|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ser | Pro | Ile | Ser | Ile | Thr | Glu | Thr | Gln | Gln | Phe | Ser | Asn | Asn | Leu | Ile |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| His | Thr | Ile | Thr | Cys | Leu | Leu | Arg | Met | Ala | Leu | Tyr | Leu | Phe | Ser | Leu |
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<210> 553
 <211> 33
 <212> PRT
 <213> homo sapiens

<400> 553

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|----------|-----|-----|-----------|----------|-----|-----|-----|-----------|-----------|-----|-----|-----|-----------|-----------|-----|
| Ile 1 | Thr | Leu | Gln | Pro 5 | Ile | Ser | Gln | Asn | Met 10 | Phe | Leu | Leu | Leu | Asn 15 | Asn |
| Thr | Gln | Leu | Phe 20 | Tyr | Leu | Cys | Val | Leu 25 | Phe | Met | Pro | Asp | His 30 | Gln | Tyr |

Gln

<210> 554
 <211> 43
 <212> PRT
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<400> 554

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|----------|-----|-----------|-----------|----------|-----|-----|-----------|-----------|-----------|-----|-----|-----|-----------|-----------|-----|
| Ser 1 | Phe | Tyr | Phe | Gly 5 | Trp | Ser | His | Tyr | Asn 10 | Glu | Asn | Lys | Tyr | Asn 15 | Ala |
| Ile | Leu | Asn | Arg 20 | Gln | Val | Met | Val | Cys 25 | Ile | Lys | Leu | Leu | Leu 30 | Asn | Cys |
| Cys | Val | Ser 35 | Val | Ile | Asp | Ile | Gly 40 | Asp | Gln | Ala | | | | | |

<210> 555
 <211> 85
 <212> PRT
 <213> homo sapiens

<400> 555

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|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Cys 1 | Phe | Thr | His | Trp 5 | Asn | Val | Phe | Pro | Arg 10 | Leu | Trp | Met | Thr | Ser 15 | Phe |
| Leu | Met | Glu | Arg 20 | Val | Gln | Glu | Gly | Trp 25 | Lys | Thr | Pro | Gly | Phe 30 | Lys | Leu |
| Ser | Ile | Pro 35 | His | Met | Gly | Phe | Ser 40 | Ile | Ile | Phe | Arg | Pro 45 | Glu | Ala | Ala |
| Arg | Pro 50 | Glu | Val | Arg | Leu | His 55 | Leu | Ser | Ala | Leu | Phe 60 | Val | Leu | Leu | Leu |
| Ala 65 | Thr | Leu | Gly | Phe | Leu 70 | Leu | Gly | Thr | Met | Cys 75 | Gly | Cys | Gly | Met | Cys 80 |
| Glu | Gln | Lys | Gly | Gly 85 | | | | | | | | | | | |

<210> 556
 <211> 106
 <212> PRT
 <213> homo sapiens

<400> 556

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|----------|-----|-----|-----------|----------|-----|-----|-----|-----------|-----------|-----|-----|-----|-----------|-----------|-----|
| Phe 1 | Asn | Asp | Gly | Lys 5 | Thr | Trp | Gln | Leu | Lys 10 | Lys | Thr | Leu | Val | Thr 15 | Asn |
| Gly | Gly | Phe | Leu 20 | Leu | Phe | Phe | Pro | His 25 | Pro | Pro | Phe | Cys | Ser 30 | His | Met |
| Pro | Gln | Pro | His | Met | Val | Pro | Ser | Arg | Asn | Pro | Lys | Val | Ala | Arg | Ser |

| | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|
| | | 35 | | | | | 40 | | | | | 45 | | | | |
| Ser | Thr | Lys | Arg | Ala | Asp | Lys | Cys | Arg | Arg | Thr | Ser | Gly | Arg | Ala | Ala | |
| | 50 | | | | | 55 | | | | | 60 | | | | | |
| Ser | Gly | Leu | Lys | Met | Ile | Glu | Lys | Pro | Met | Trp | Gly | Met | Leu | Ser | Leu | |
| 65 | | | | | 70 | | | | | 75 | | | | | 80 | |
| Asn | Pro | Gly | Val | Phe | His | Pro | Ser | Trp | Thr | Leu | Ser | Ile | Arg | Lys | Glu | |
| | | | | 85 | | | | | 90 | | | | | 95 | | |
| Val | Ile | His | Asn | Arg | Gly | Lys | Thr | Phe | Gln | | | | | | | |
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<210> 557
 <211> 109
 <212> PRT
 <213> homo sapiens

<400> 557

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|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|
| Asn | Ile | Asn | Tyr | Ile | Glu | Ile | Ile | Phe | Leu | Phe | Leu | Leu | Leu | Ile | Ser | |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | | |
| Pro | Leu | Gly | Pro | His | Arg | Leu | Ser | Pro | Ala | Gln | Leu | Ala | Gln | Leu | Ala | |
| | | | 20 | | | | | 25 | | | | | 30 | | | |
| Gln | Leu | Ala | His | Ser | Pro | Gln | Val | Ser | Arg | Arg | His | Arg | Ala | Leu | Thr | |
| | | 35 | | | | | 40 | | | | | 45 | | | | |
| Met | Val | Gly | Trp | His | Gly | Val | Ser | Asn | Val | Ala | Asn | Ser | Ser | His | His | |
| | 50 | | | | | 55 | | | | | 60 | | | | | |
| Pro | His | Pro | His | Ser | Pro | Ser | Gln | Arg | Pro | Leu | Val | Val | Gly | Pro | Ala | |
| 65 | | | | | 70 | | | | | 75 | | | | | 80 | |
| Val | Phe | Gln | Lys | Gly | Leu | Thr | Cys | Thr | Asn | Leu | Arg | Gln | Thr | Tyr | Ala | |
| | | | | 85 | | | | | 90 | | | | | 95 | | |
| Pro | Phe | Ser | Val | Ser | Leu | Ala | Ser | Pro | Ser | Trp | Glu | Asp | | | | |
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<210> 558
 <211> 50
 <212> PRT
 <213> homo sapiens

<400> 558

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|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|
| Leu | Gly | Ile | Phe | Val | Ala | Tyr | Arg | Asn | Gln | Leu | Gly | Val | Pro | Ser | Leu | |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | | |
| Met | Arg | Cys | Ser | Trp | Lys | Ala | Ile | Tyr | Ala | Arg | Gly | Gly | Phe | Thr | Phe | |
| | | | 20 | | | | | 25 | | | | | 30 | | | |
| Val | Ala | Pro | Pro | Phe | Ile | Asp | Pro | Ser | Ala | Phe | Lys | Lys | Leu | Glu | Cys | |
| | | 35 | | | | | 40 | | | | | 45 | | | | |
| Glu | Asn | | | | | | | | | | | | | | | |
| | 50 | | | | | | | | | | | | | | | |

<210> 559
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<212> PRT
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<400> 559

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| Phe 1 | Arg | Leu | Pro | Phe 5 | Leu | Thr | Trp | His | Phe 10 | Cys | Ser | Leu | Gln | Glu 15 | Pro |
| Ala | Trp | Cys | Thr 20 | Phe | Ser | Tyr | Glu | Met 25 | Gln | Leu | Glu | Ser | His 30 | Leu | Cys |
| Lys | Arg | Trp 35 | Phe | His | Phe | Cys | Arg 40 | Ser | Ser | Ile | His | | | | |

<210> 560

<211> 45

<212> PRT

<213> homo sapiens

<400> 560

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|----------|-----|-----------|-----------|----------|-----|-----|-----------|-----------|-----------|-----|-----|-----------|-----------|-----------|-----|
| Arg 1 | Val | Asn | Glu | Trp 5 | Arg | Ser | Asp | Lys | Ser 10 | Glu | Thr | Thr | Ser | Cys 15 | Ile |
| Asn | Gly | Phe | Pro 20 | Ala | Ala | Ser | His | Lys 25 | Arg | Arg | Tyr | Thr | Lys 30 | Leu | Val |
| Pro | Val | Ser 35 | Tyr | Lys | Asn | Ala | Lys 40 | Leu | Arg | Met | Gly | Val 45 | | | |

<210> 561

<211> 34

<212> PRT

<213> homo sapiens

<400> 561

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|----------|-----|-----|-----------|----------|-----|-----|-----|-----------|-----------|-----|-----|-----|-----------|-----------|-----|
| Met 1 | Arg | Ser | Arg | Leu 5 | Pro | Cys | Glu | Gly | Leu 10 | Val | Ala | Arg | His | Pro 15 | Arg |
| Glu | Leu | Arg | Val 20 | Pro | Ser | Val | Arg | Phe 25 | Trp | Ile | Asp | Trp | Pro 30 | Trp | Val |
| Leu | Thr | | | | | | | | | | | | | | |

<210> 562

<211> 67

<212> PRT

<213> homo sapiens

<400> 562

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|----------|-----------|-----------|-----------|----------|-----|-----------|-----------|-----------|-----------|-----|-----------|-----------|-----------|-----------|-----|
| Val 1 | Ser | Thr | His | Gly 5 | Gln | Ser | Ile | Gln | Lys 10 | Arg | Thr | Glu | Gly | Thr 15 | Arg |
| Ser | Ser | Arg | Gly 20 | Cys | Arg | Ala | Thr | Ser 25 | Pro | Ser | His | Gly | Asn 30 | Arg | Leu |
| Leu | Ile | Gln 35 | Glu | Ser | Phe | Pro | Gln 40 | Asn | Pro | Pro | Arg | Ala 45 | Arg | Phe | Gln |
| Gly | His 50 | Pro | Leu | Gly | Arg | Gln 55 | Ser | Arg | Gln | Gln | Pro 60 | Phe | Thr | Glu | Ala |

Met Ser Gln
65

<210> 563
<211> 50
<212> PRT
<213> homo sapiens

<400> 563

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|----------|-----------|-----------|-----------|----------|-----|-----|-----------|-----------|-----------|-----|-----|-----------|-----------|-----------|-----|
| Ala 1 | Pro | Met | Ala | Ser 5 | Gln | Ser | Arg | Ser | Ala 10 | Leu | Arg | Ala | Arg | Val 15 | Ala |
| His | Ala | Gly | Ala 20 | Val | Pro | Pro | Ala | Leu 25 | His | Thr | Ala | Ile | Asp 30 | Ser | Ser |
| Phe | Arg | Asn 35 | His | Phe | Leu | Lys | Thr 40 | His | Gln | Gly | Leu | Gly 45 | Ser | Lys | Gly |
| Thr | Arg 50 | | | | | | | | | | | | | | |

<210> 564
<211> 54
<212> PRT
<213> homo sapiens

<400> 564

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| Tyr 1 | Ser | Ile | Ile | Phe 5 | Glu | Gln | Phe | Phe | Lys 10 | Cys | Lys | Ser | Val | Ser 15 | Tyr |
| Ser | Glu | Cys | Val 20 | Ser | Glu | Val | Ile | Lys 25 | Asp | Ile | Ser | Gln | Arg 30 | Tyr | Trp |
| Pro | Ile | Ser 35 | Leu | Cys | Asn | Gln | Arg 40 | Asn | Ser | Val | Ser | Arg 45 | Leu | Leu | Leu |
| Cys | Val 50 | Ile | Cys | Gly | Ser | | | | | | | | | | |

<210> 565
<211> 57
<212> PRT
<213> homo sapiens

<400> 565

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|----------|-----------|-----------|-----------|----------|-----|-----------|-----------|-----------|-----------|-----|-----|-----------|-----------|-----------|-----|
| Cys 1 | Thr | Met | Val | Asn 5 | Val | Asp | Asn | Thr | Val 10 | Ser | Phe | Leu | Ser | Ser 15 | Phe |
| Leu | Asn | Val | Asn 20 | Leu | Tyr | Leu | Thr | Gln 25 | Ser | Val | Cys | Leu | Lys 30 | Leu | Leu |
| Arg | Thr | Phe 35 | Pro | Asn | Val | Thr | Gly 40 | Pro | Phe | Pro | Phe | Val 45 | Ile | Arg | Gly |
| Ile | Leu 50 | Phe | Gln | Asp | Tyr | Cys 55 | Cys | Val | | | | | | | |

<210> 566
<211> 49

<212> PRT
 <213> homo sapiens

<400> 566

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| Glu | Lys | Cys | Gln | Pro | His | Ser | Leu | Ile | Leu | Leu | Trp | Pro | Phe | Asn | Phe | |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | | |
| Ile | Leu | Ile | Lys | Ser | His | Arg | Ser | His | Thr | Thr | Ile | Ile | Leu | Lys | Gln | |
| | | | 20 | | | | | 25 | | | | | 30 | | | |
| Asn | Ser | Ser | Asp | Tyr | Lys | Gly | Lys | Trp | Ala | Ser | Asn | Val | Gly | Lys | Cys | |
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| Pro | | | | | | | | | | | | | | | | |

<210> 567
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 <212> PRT
 <213> homo sapiens

<400> 567

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| Gly | Glu | Gly | Arg | Val | Trp | Asn | Pro | Glu | Gly | Ser | Lys | Ser | Arg | His | Trp | |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | | |
| Pro | Asp | His | Pro | Ala | Pro | Trp | Ala | Pro | Ser | Pro | Arg | Gln | Glu | Gln | Leu | |
| | | | 20 | | | | | 25 | | | | | 30 | | | |
| Phe | Ser | Ile | Pro | Ser | Gln | Thr | Ser | Ser | Ile | Phe | Ile | Thr | Met | Thr | Phe | |
| | | 35 | | | | | 40 | | | | | 45 | | | | |
| Arg | Glu | Val | Ser | Gln | Ala | Ser | Ser | Arg | Cys | Pro | Thr | Ile | Pro | Ser | Gly | |
| | 50 | | | | | 55 | | | | | 60 | | | | | |
| Gly | Lys | Arg | Gln | Glu | Asn | Ser | Pro | Arg | Val | Pro | Val | Met | Leu | Leu | Ser | |
| 65 | | | | | 70 | | | | | 75 | | | | | 80 | |
| Pro | Ser | Gln | Phe | Arg | Leu | Ser | Arg | Thr | Ser | Tyr | Leu | Gln | Pro | | | |
| | | | | 85 | | | | | 90 | | | | | | | |

<210> 568
 <211> 89
 <212> PRT
 <213> homo sapiens

<400> 568

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| Gly | Leu | Thr | Leu | Lys | Lys | Gly | Thr | Phe | Pro | Arg | Gly | Pro | Glu | Ile | Gln | |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | | |
| Ala | Asp | Pro | Asn | Leu | Thr | Pro | Cys | Ser | Arg | Thr | Gln | Ala | His | Arg | Pro | |
| | | | 20 | | | | | 25 | | | | | 30 | | | |
| Leu | Asn | Ser | Asn | Pro | Thr | Ser | Pro | Pro | Pro | Pro | Pro | Thr | Pro | Asp | Phe | |
| | | 35 | | | | | 40 | | | | | 45 | | | | |
| Leu | Ile | Ser | Trp | Asn | Ala | Phe | Gln | Asp | Trp | Lys | Ser | Pro | Gln | Gly | Ser | |
| | 50 | | | | | 55 | | | | | 60 | | | | | |
| Ser | Glu | Pro | Ile | Leu | Ser | Pro | Ala | Arg | Ile | Ser | Ser | Met | His | Pro | Gly | |
| 65 | | | | | 70 | | | | | 75 | | | | | 80 | |

His Ala Phe His Ile Ser Arg Asn Lys
85

<210> 569
<211> 89
<212> PRT
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<400> 569

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| Asp 1 | Val | Leu | Asp | Ser 5 | Leu | Asn | Trp | Asp | Gly 10 | Glu | Ser | Ser | Met | Thr 15 | Gly |
| Thr | Arg | Gly | Glu 20 | Phe | Ser | Cys | Leu | Phe 25 | Pro | Pro | Glu | Gly | Ile 30 | Val | Gly |
| His | Leu | Glu 35 | Leu | Ala | Trp | Glu | Thr 40 | Ser | Leu | Lys | Val | Ile 45 | Val | Ile | Lys |
| Ile | Glu 50 | Leu | Val | Trp | Glu | Gly 55 | Met | Glu | Asn | Ser | Cys 60 | Ser | Cys | Leu | Gly |
| Leu 65 | Gly | Ala | Gln | Gly | Ala 70 | Gly | Trp | Ser | Gly | Gln 75 | Cys | Leu | Asp | Leu | Leu 80 |
| Pro | Ser | Gly | Phe | His 85 | Thr | Arg | Pro | Ser | | | | | | | |

<210> 570
<211> 73
<212> PRT
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<400> 570

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| Lys 1 | Ser | Ile | Ala | His 5 | Ser | Val | Ile | Gly | Tyr 10 | Phe | His | Asp | Phe | Lys 15 | Trp |
| Phe | Tyr | Glu | Glu 20 | Thr | Glu | Ser | Ser | Asp 25 | Asp | Val | Glu | Val | Leu 30 | Thr | Leu |
| Lys | Lys | Phe 35 | Lys | Gly | Asp | Leu | Ala 40 | Tyr | Arg | Arg | Gln | Glu 45 | Tyr | Gln | Val |
| Glu | Phe 50 | Asn | Ile | Trp | Cys | Leu 55 | Lys | Trp | Ala | Leu | Val 60 | Leu | Ser | Val | Met |
| Ala 65 | Tyr | Val | Asn | Asn | Ser 70 | Val | Pro | Ser | | | | | | | |

<210> 571
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<212> PRT
<213> homo sapiens

<400> 571

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| Ser 1 | Ala | Asp | Ser | Gln 5 | Glu | Ile | Gln | Arg | Arg 10 | Pro | Gly | Leu | Gln | Thr 15 | Thr |
| Arg | Val | Ser | Gly 20 | Arg | Ile | Gln | His | Met 25 | Val | Leu | Glu | Val | Gly 30 | Ser | Cys |

Phe Ile Ser Tyr Gly Ile Cys Lys
35 40

<210> 572
<211> 60
<212> PRT
<213> homo sapiens

<400> 572

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|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Asn | Lys | Ser | Pro | Leu | Gln | Ala | Pro | Tyr | Val | Glu | Phe | Tyr | Leu | Ile | Leu |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Leu | Ser | Ser | Val | Gly | Gln | Val | Ser | Phe | Glu | Phe | Leu | Glu | Ser | Gln | His |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Phe | Asn | Ile | Ile | Thr | Ala | Phe | Cys | Phe | Phe | Ile | Lys | Pro | Leu | Glu | Ile |
| | | 35 | | | | | 40 | | | | | 45 | | | |
| Met | Lys | Ile | Ala | Tyr | Tyr | Arg | Val | Ser | Tyr | Ala | Phe | | | | |
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<210> 573
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<212> PRT
<213> homo sapiens

<400> 573

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| Gly | Asn | Leu | Ser | Leu | Glu | Ser | Leu | Cys | Asn | Leu | Tyr | Asn | Trp | Arg | Tyr |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Lys | Asn | Leu | Gly | Asn | Leu | Pro | His | Val | Gln | Leu | Leu | Pro | Glu | Phe | Ser |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Thr | Ala | Asn | Ala | Gly | Leu | Leu | Tyr | Asp | Phe | Gln | Leu | Ile | Asn | Val | Glu |
| | | 35 | | | | | 40 | | | | | 45 | | | |
| Asp | Phe | Gln | Gly | Val | Gly | Glu | Ser | Glu | Pro | Asn | Pro | Tyr | Phe | Tyr | Gln |
| | 50 | | | | | 55 | | | | | 60 | | | | |
| Asn | Leu | Gly | Glu | Ala | Glu | Tyr | Val | Val | Ala | Leu | Phe | Met | Tyr | Met | Cys |
| 65 | | | | | 70 | | | | | 75 | | | | | 80 |
| Leu | Leu | Gly | Tyr | Pro | Ala | Asp | Lys | Ile | Ser | Ile | Leu | Thr | Thr | Tyr | Asn |
| | | | | 85 | | | | | 90 | | | | | 95 | |
| Gly | Gln | Lys | His | Leu | Ile | Arg | Asp | Ile | Ile | Asn | Arg | Arg | Cys | Gly | Asn |
| | | | 100 | | | | | 105 | | | | | 110 | | |
| Asn | Pro | Leu | Ile | Gly | Arg | Pro | Asn | Lys | Val | Thr | Thr | Val | Asp | Arg | Phe |
| | | 115 | | | | | 120 | | | | | 125 | | | |
| Gln | Gly | Gln | Gln | Asn | Asp | Tyr | Ile | Leu | Leu | Ser | Leu | Val | Arg | Thr | Arg |
| | 130 | | | | | 135 | | | | | 140 | | | | |
| Ala | Val | Gly | His | Leu | Arg | Asp | Val | Arg | Arg | Leu | Val | Val | Ala | Met | Ser |
| 145 | | | | | 150 | | | | | 155 | | | | | 160 |
| Arg | Ala | Arg | Leu | Gly | Leu | Tyr | Ile | Phe | Ala | Arg | Val | Ser | Leu | Phe | Gln |
| | | | | 165 | | | | | 170 | | | | | 175 | |
| Asn | Cys | Phe | Glu | Leu | Thr | Pro | Ala | Phe | Ser | Gln | Leu | Thr | Ala | Arg | Pro |

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| 180 | | | | | | 185 | | | | | | 190 | | | |
|--------------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Leu | His | Leu 195 | His | Ile | Ile | Pro | Thr 200 | Glu | Pro | Phe | Pro | Thr 205 | Thr | Arg | Lys |
| Asn | Gly 210 | Glu | Arg | Pro | Ser | His 215 | Glu | Val | Gln | Ile | Ile 220 | Lys | Asn | Met | Pro |
| Gln 225 | Met | Ala | Asn | Phe | Val 230 | Tyr | Asn | Met | Tyr | Met 235 | His | Leu | Ile | Gln | Thr 240 |
| Thr | His | His | Tyr | His 245 | Gln | Thr | Leu | Leu | Gln 250 | Leu | Pro | Pro | Ala | Met 255 | Val |
| Glu | Glu | Gly | Glu 260 | Glu | Val | Gln | Asn | Gln 265 | Glu | Thr | Glu | Leu | Glu 270 | Thr | Glu |
| Glu | Glu | Ala 275 | Met | Thr | Val | Gln | Ala 280 | Asp | Ile | Ile | Pro | Ser 285 | Pro | Thr | Asp |
| Thr | Ser 290 | Cys | Arg | Gln | Glu | Thr 295 | Pro | Ala | Phe | Glu | Arg 300 | Glu | Ser | Arg | Pro |
| Gly 305 | Gly | Glu | Gly | Ala | Ile 310 | Ala | Leu | Gly | Gly | Leu 315 | Gly | Cys | Phe | | |
| <210> 574 | | | | | | | | | | | | | | | |
| <211> 67 | | | | | | | | | | | | | | | |
| <212> PRT | | | | | | | | | | | | | | | |
| <213> homo sapiens | | | | | | | | | | | | | | | |
| <400> 574 | | | | | | | | | | | | | | | |
| Lys 1 | Thr | Pro | Lys | Pro 5 | Pro | Gln | Arg | Asn | Cys 10 | Pro | Phe | Pro | Thr | Gly 15 | Ala |
| Ala | Leu | Thr | Leu 20 | Lys | Gly | Trp | Ser | Phe 25 | Leu | Thr | Ala | Ala | Gly 30 | Val | Cys |
| Trp | Thr | Gly 35 | Tyr | Asp | Val | Ser | Leu 40 | Asn | Ser | His | Gly | Leu 45 | Phe | Phe | Cys |
| Phe | Gln 50 | Leu | Cys | Phe | Leu | Ile 55 | Leu | Asn | Phe | Leu | Thr 60 | Leu | Phe | Tyr | His |
| Ser 65 | Arg | Trp | | | | | | | | | | | | | |
| <210> 575 | | | | | | | | | | | | | | | |
| <211> 155 | | | | | | | | | | | | | | | |
| <212> PRT | | | | | | | | | | | | | | | |
| <213> homo sapiens | | | | | | | | | | | | | | | |
| <400> 575 | | | | | | | | | | | | | | | |
| Ser 1 | Leu | Met | Ile | Met 5 | Met | Cys | Ser | Leu | Tyr 10 | Gln | Met | His | Val | His 15 | Val |
| Val | Tyr | Lys | Val 20 | Cys | His | Leu | Gly | His 25 | Ile | Phe | Tyr | Tyr | Leu 30 | Tyr | Phe |
| Met | Arg | Trp 35 | Ser | Leu | Ser | Ile | Leu 40 | Ser | Ser | Ser | Trp | Glu 45 | Arg | Phe | Cys |

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Trp | Asn | Tyr | Met | Gln | Met | Lys | Gly | Ala | Ser | Cys | Glu | Leu | Thr | Glu | Ser |
| | 50 | | | | | 55 | | | | | 60 | | | | |
| Trp | Ser | Gln | Phe | Lys | Thr | Val | Leu | Glu | Glu | Gly | Tyr | Ser | Gly | Glu | Asp |
| 65 | | | | | 70 | | | | | 75 | | | | | 80 |
| Ile | Lys | Ser | Lys | Ser | Gly | Ser | Arg | His | Gly | His | Tyr | Gln | Ala | Thr | Asp |
| | | | | 85 | | | | | 90 | | | | | 95 | |
| Ile | Pro | Gln | Met | Ala | His | Cys | Pro | Gly | Ser | Tyr | Gln | Arg | Lys | Lys | Asn |
| | | | 100 | | | | | 105 | | | | | 110 | | |
| Ile | Val | Ile | Leu | Leu | Thr | Leu | Lys | Ser | Ile | Asn | Ser | Cys | His | Leu | Val |
| | | 115 | | | | | 120 | | | | | 125 | | | |
| Trp | Ser | Ser | Asn | Gln | Trp | Ile | Val | Ser | Thr | Ser | Ser | Ile | Asp | Asp | Val |
| | 130 | | | | | 135 | | | | | 140 | | | | |
| Ala | Asn | Lys | Met | Leu | Leu | Ala | Ile | Ile | Cys | Cys | | | | | |
| 145 | | | | | 150 | | | | | 155 | | | | | |

<210> 576
 <211> 57
 <212> PRT
 <213> homo sapiens

<400> 576

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Asp | His | Leu | Gly | Phe | Ile | Ser | Thr | Lys | Met | Arg | Thr | Asn | His | Gly | Val |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Arg | Lys | Gly | Ser | Leu | Glu | Glu | His | Lys | Asn | Leu | Lys | Ala | Leu | Gly | Gly |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Tyr | His | Tyr | Tyr | Ile | Ser | Tyr | Phe | His | Arg | Ser | Asp | Leu | Ala | Lys | Leu |
| | | 35 | | | | | 40 | | | | | 45 | | | |
| Cys | Ile | Leu | Ser | Leu | Leu | Thr | Phe | Ile | | | | | | | |
| | 50 | | | | | 55 | | | | | | | | | |

<210> 577
 <211> 48
 <212> PRT
 <213> homo sapiens

<400> 577

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Phe | Lys | Phe | Phe | Leu | Met | Thr | Ile | Phe | Leu | Gln | Asn | Phe | Glu | Arg | Lys |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Met | Cys | Ser | Phe | Cys | Cys | Ile | Leu | Cys | Lys | Lys | Thr | Ala | Asn | Arg | Gly |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Lys | Arg | Thr | Leu | Gln | Ile | Lys | Thr | Ile | Leu | Val | Ser | Phe | Pro | Gln | Arg |
| | | 35 | | | | | 40 | | | | | 45 | | | |

<210> 578
 <211> 48
 <212> PRT
 <213> homo sapiens

<400> 578

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|----------|-----|-----------|-----------|----------|-----|-----|-----------|-----------|-----------|-----|-----|-----------|-----------|-----------|-----|
| Leu 1 | Tyr | Phe | Phe | Lys 5 | Thr | Leu | Lys | Glu | Lys 10 | Cys | Val | Leu | Phe | Ala 15 | Ala |
| Ser | Phe | Val | Arg 20 | Arg | Leu | Pro | Thr | Glu 25 | Glu | Lys | Gly | Leu | Tyr 30 | Lys | Leu |
| Arg | Pro | Ser 35 | Trp | Phe | His | Phe | His 40 | Lys | Asp | Glu | Asn | Lys 45 | Ser | Trp | Cys |

<210> 579
 <211> 48
 <212> PRT
 <213> homo sapiens

<400> 579

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|----------|-----|-----------|-----------|----------|-----|-----|-----------|-----------|-----------|-----|-----|-----------|-----------|-----------|-----|
| Gly 1 | Ser | Phe | Pro | Asn 5 | Thr | Met | Ile | Cys | Ser 10 | His | Leu | Cys | Gly | Asn 15 | Glu |
| Thr | Lys | Met | Val 20 | Leu | Ile | Cys | Lys | Val 25 | Leu | Phe | Pro | Leu | Leu 30 | Ala | Val |
| Phe | Leu | Gln 35 | Arg | Met | Gln | Gln | Lys 40 | Glu | His | Ile | Phe | Leu 45 | Ser | Lys | Phe |

<210> 580
 <211> 48
 <212> PRT
 <213> homo sapiens

<400> 580

| | | | | | | | | | | | | | | | |
|----------|-----|-----------|-----------|----------|-----|-----|-----------|-----------|-----------|-----|-----|-----------|-----------|-----------|-----|
| His 1 | Cys | Arg | Ile | Leu 5 | Gln | Gly | Leu | Ser | Pro 10 | Leu | Val | Gly | Arg | Glu 15 | Lys |
| Thr | Thr | Gln | Val 20 | Met | Arg | Asn | Phe | Tyr 25 | Ser | Phe | Gln | Glu | Leu 30 | Glu | Glu |
| Gln | Leu | Leu 35 | Ile | Lys | Phe | His | Ala 40 | Leu | Val | Thr | Lys | Tyr 45 | Phe | Tyr | Ser |

<210> 581
 <211> 59
 <212> PRT
 <213> homo sapiens

<400> 581

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|----------|-----------|-----------|-----------|----------|-----|-----------|-----------|-----------|-----------|-----|-----|-----------|-----------|-----------|-----|
| Ile 1 | Met | Pro | Arg | Ala 5 | Pro | Leu | Tyr | Arg | Ile 10 | Pro | Leu | Asn | Cys | Asn 15 | Tyr |
| Val | Leu | Leu | Lys 20 | Ser | Gln | Leu | Val | Lys 25 | Glu | Glu | Leu | Met | Val 30 | Ser | Val |
| Phe | Val | Gly 35 | Asn | Thr | Cys | Asn | Thr 40 | Ala | Glu | Phe | Tyr | Lys 45 | Gly | Phe | Leu |
| Leu | Trp 50 | Trp | Ala | Gly | Lys | Lys 55 | Pro | Leu | Lys | Ser | | | | | |

<210> 582
 <211> 44

<212> PRT
<213> homo sapiens

<400> 582

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|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gly | Thr | Leu | Arg | Pro | Arg | Ser | Ser | Asp | Val | Leu | Pro | Ile | Tyr | Leu | Cys |
| 1 | | | | 5 | | | | 10 | | | | | | 15 | |
| Phe | Thr | Thr | Cys | Leu | Leu | Ser | Leu | Thr | Pro | Asn | Ile | Phe | Thr | Tyr | Phe |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Ser | Asn | Ser | Ala | Cys | His | Lys | Phe | Ala | Ala | Ser | Pro | | | | |
| | | 35 | | | | | 40 | | | | | | | | |

<210> 583
<211> 46
<212> PRT
<213> homo sapiens

<400> 583

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|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Asn | Val | Asp | Ser | Cys | Gln | Thr | His | Ser | Leu | Ala | Leu | Ile | Pro | Pro | Leu |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Leu | Ser | Ser | Ser | Asp | Ile | Val | Asn | Asn | Asp | Lys | Gln | Leu | Leu | Cys | Thr |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Glu | Cys | Phe | Phe | Met | Cys | Cys | Ser | His | Phe | Ile | His | Met | Tyr | | |
| | | 35 | | | | | 40 | | | | | 45 | | | |

<210> 584
<211> 41
<212> PRT
<213> homo sapiens

<400> 584

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|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Tyr | Met | Cys | Ile | Lys | Cys | Glu | Gln | His | Ile | Lys | Lys | His | Ser | Val |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| His | Ser | Ser | Cys | Leu | Ser | Leu | Leu | Thr | Ile | Ser | Leu | Leu | Glu | Arg | Arg |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Gly | Gly | Ile | Arg | Ala | Arg | Leu | Cys | Val | | | | | | | |
| | | 35 | | | | | 40 | | | | | | | | |

<210> 585
<400> 585
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<210> 586
<400> 586
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<210> 587
<400> 587
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<210> 588
<211> 112
<212> PRT
<213> homo sapiens

<400> 588

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|-----------|-----------|-----------|------------|-----------|-----------|-----------|-----------|------------|-----------|-----------|-----------|-----------|------------|-----------|-----------|
| Gly 1 | Lys | Pro | Leu | Val 5 | Leu | His | Ala | Thr | Pro 10 | Leu | Ser | Arg | Cys | Pro 15 | Leu |
| Pro | Leu | His | Pro 20 | Thr | Arg | Ser | Leu | Ile 25 | Leu | Arg | Pro | Ser | Leu 30 | His | Leu |
| Ser | Asp | Pro 35 | Ser | Phe | His | His | Tyr 40 | Leu | Gln | Arg | Cys | Ser 45 | Tyr | Tyr | Ala |
| Pro | Val 50 | Tyr | Arg | Gly | Cys | Pro 55 | Thr | Met | Thr | Val | Pro 60 | Ser | Gln | Ser | Asn |
| Tyr 65 | Ser | Ser | Gly | Pro | Lys 70 | Val | Trp | Leu | Ser | Arg 75 | Ala | Pro | Leu | Pro | Arg 80 |
| Arg | Gly | Arg | Pro | Phe 85 | Gln | Ala | Leu | Pro | Gly 90 | Trp | Asn | Trp | Cys | Arg 95 | Arg |
| Ser | Leu | Gly | Cys 100 | Ile | Val | Arg | Pro | Gly 105 | Val | Gly | Val | Ala | Ser 110 | Leu | Leu |

<210> 589
 <211> 76
 <212> PRT
 <213> homo sapiens

<400> 589

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|-----------|-----------|-----------|-----------|----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----|
| Gly 1 | Arg | Ser | Arg | Glu 5 | Ala | Pro | Ala | Gly | Trp 10 | Pro | Lys | Ser | Thr | Lys 15 | Pro |
| Pro | Ser | Ala | Arg 20 | Glu | Asn | Pro | Trp | Phe 25 | Ser | Met | Pro | His | Leu 30 | Ser | Pro |
| Gly | Ala | Leu 35 | Cys | Leu | Phe | Thr | Pro 40 | Gln | Glu | Ala | Leu | Ser 45 | Tyr | Val | Leu |
| Leu | Ser 50 | Ile | Tyr | Arg | Thr | Pro 55 | Val | Ser | Ile | Thr | Ile 60 | Ser | Arg | Asp | Val |
| Ala 65 | Ile | Met | Arg | Pro | Ser 70 | Thr | Gly | Gly | Ala | Arg 75 | Arg | | | | |

<210> 590
 <211> 97
 <212> PRT
 <213> homo sapiens

<400> 590

| | | | | | | | | | | | | | | | |
|----------|-----------|-----------|-----------|----------|-----|-----------|-----------|-----------|-----------|-----|-----------|-----------|-----------|-----------|-----|
| Ala 1 | Gly | Leu | Asp | Gln 5 | Lys | Glu | Glu | Leu | Arg 10 | Gly | Val | Arg | Gln | His 15 | Gln |
| His | Gln | Gly | Val 20 | Arg | Tyr | Thr | Arg | Gly 25 | Ser | Ser | Asp | Thr | Ser 30 | Ser | Ser |
| Pro | Glu | Gly 35 | Leu | Gly | Met | Ala | Cys 40 | His | Ala | Gly | Ala | Met 45 | Glu | Arg | Val |
| Lys | Ala 50 | Lys | Pro | Trp | Asp | Pro 55 | Lys | Ser | Asn | Leu | Thr 60 | Ala | Lys | Ala | Pro |

50

55

<210> 594
 <211> 41
 <212> PRT
 <213> homo sapiens

<400> 594

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ser | Gly | Asp | Val | Cys | Thr | Glu | Ser | His | Cys | Gly | Leu | Ser | Arg | Val | Lys |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Glu | Lys | Glu | Gln | Gln | Glu | Leu | Ser | Leu | Gly | Arg | Trp | Arg | Arg | Gly | Gly |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Ile | Asp | Gln | Ala | Arg | Pro | Trp | Pro | Trp | | | | | | | |
| | | 35 | | | | | 40 | | | | | | | | |

<210> 595
 <211> 47
 <212> PRT
 <213> homo sapiens

<400> 595

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|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Phe | Lys | Val | Gly | Leu | Trp | Lys | Gly | Asp | Ile | Val | Glu | Gly | Glu | Arg | Ala |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Val | Leu | Tyr | Thr | Tyr | Lys | Trp | Tyr | Thr | Pro | Phe | Ile | His | Gly | Gly | Gln |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Arg | Ser | Ser | Asp | Gln | Val | Thr | Tyr | Val | Gln | Lys | Val | Thr | Val | Ala | |
| | | 35 | | | | | 40 | | | | | 45 | | | |

<210> 596
 <211> 44
 <212> PRT
 <213> homo sapiens

<400> 596

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|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ser | Val | Leu | Thr | Thr | Ser | Gln | Arg | Leu | Ser | Ser | His | Phe | Lys | Ser | Gln |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Ile | Pro | Thr | Arg | Ala | Lys | Val | Leu | Leu | Asp | Leu | Phe | His | Pro | Phe | Ser |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Thr | Ser | Leu | Ser | Ser | Thr | Leu | Ala | Ala | Pro | Ser | Pro | | | | |
| | | 35 | | | | | 40 | | | | | | | | |

<210> 597
 <211> 1651
 <212> DNA
 <213> homo sapiens

<400> 597

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ggcctccctg atacccccgc agctccagaa accagcacca actaccagtg ggagtgcacc 120
gaggggtctg caggcccccga gtctctcccc ttgcctattc tggagccggt caaaaacccc 180
tgctctgtca aagaccagac gccactccaa ctttctgtag aagataccac ctctccaaat 240
accaagccgt gcccacctac tcccaccacc ccagaaacat gggggggggg gggggggggg 300
gcgcggtcat ctactccttg ttcagctcac ctgacccctt cctccctgtt cccttctctc 360

```

| | | | | | | |
|------------|------------|------------|-------------|------------|-------------|------|
| ctggaatcat | catcggaaca | gaaattctat | aactttgtga | tcctccacgc | cagggcagac | 420 |
| gaacacatcg | ccctgcgggg | tcgggagaag | ctggaggccc | ttggcgtgcc | cgacggggcc | 480 |
| acctcttgcg | aggatttcca | ggtgccgggg | cgcggggagc | tgagctgcct | gcaggacgcc | 540 |
| atagaccact | cagctttcat | catcctactt | ctcacctcca | acttcgactg | tcgcctgagc | 600 |
| ctgcaccagg | tgaaccaagc | catgatgagc | aacctcacgc | gacaggggtc | gccagactgt | 660 |
| gtcatccctt | tcctgcccct | ggagagctcc | ccggcccagc | tcagctccga | cacggccagc | 720 |
| ctgctctccg | ggctggtgcg | gctggacgaa | cactcccaga | tcttcgccag | gaaggtggcc | 780 |
| aacaccttca | agccccacag | gcttcaggcc | cgaaaggcca | tgtggaggaa | ggaacaggac | 840 |
| acccgagccc | tgcgggaaca | gagccaacac | ctggacggtg | agcggatgca | ggcggcggca | 900 |
| ctgaacgcag | cctactcagc | ctacctccag | agctacttgt | cctaccaggc | acagatggag | 960 |
| cagctccagg | tggcttttgg | gagccacatg | tcattttggga | ctggggcgcc | ctatgggggtc | 1020 |
| agaatgccct | ttgggggcca | ggggcccctg | ggagcccgcg | caccttttcc | cacttgcccg | 1080 |
| gggtgcccgc | agccgccacc | cctgcacgca | tggcaggctg | gcaccccccc | accgccctcc | 1140 |
| ccacagccag | cagcctttcc | acagtcactg | cccttcccgc | agtccccagc | cttccctacg | 1200 |
| gcctcaccgc | cacccccctc | gagcccaggg | ctgcaacccc | tcattatcca | ccacgcacag | 1260 |
| atggtacagc | tggggctgaa | caaccacatg | tggaaccaga | gaggggtcca | ggcgcccagag | 1320 |
| gacaagacgc | aggaggcaga | atgaccgcgt | gtccttgccct | gaccacctgg | ggaacacccc | 1380 |
| tggacccagg | catcggccag | gaccccatag | agcaccgccg | tctgccctgt | gccctgtgga | 1440 |
| cagtgaagaa | tgaggtcatc | tgccactttc | aggacattgt | ccgggagccc | ttcatttagg | 1500 |
| acaaaaacgg | cgcgatgatg | ccctggcttt | caggggtggtc | agaactggat | acgggtgttt | 1560 |
| caattccaat | ctctctattt | ctgggtgaag | ggtcttggtg | gtgggggtat | tgctacgggtc | 1620 |
| ttttaattat | aataaatatt | tattgaatgc | t | | | 1651 |

<210> 598
 <211> 3304
 <212> DNA
 <213> homo sapiens
 <400> 598

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| agagtgcagc | ggcaggcctg | gggatggcct | cgggagaggg | accacagagc | accagcctgc | 120 |
| atggaacttc | cttcctcact | cagcttccca | cgttgccagc | tgggacaggg | gagatggagt | 180 |
| aattttgctg | tggaaaagact | tcacgtcttg | ccgaatgaaa | gtcccgcctg | tctgtcacgc | 240 |
| tgatgcccgt | gcagctgtct | gagcaccggg | aatggaatga | gtctatgcac | tccttccgga | 300 |
| tcagtgtggg | gggccttcct | gtgctggcgt | ccatgaccaa | ggccgcggac | ccccgcttcc | 360 |
| gcccccgctg | gaagggtgat | ctgacgttct | ttgtgggtgc | tgccatcctc | tgggtgctct | 420 |
| gtccccaccg | cccggccccc | ggcaggcccc | ccaccacaaa | tgcacacaac | tggaggctcg | 480 |
| gccaggcgcc | cgccaaactg | tacaatgaca | cctacccccct | gtctccccca | caaaggacac | 540 |
| cggctgggat | tcggtatcga | atcgcagtta | tcgcagacct | ggacacagag | ccaaccgccc | 600 |
| aagacgaaaa | cacctggcgc | agcgacctga | aaaagggcta | cctgaccctg | tcagacagtg | 660 |
| gggacaagg | ggccgtggaa | tgggacaaa | accatggggg | cctggagtcc | cacctggcgg | 720 |
| agaaggggag | aggcatggag | ctatccgacc | tgattgtttt | caatgggaaa | ctctactccg | 780 |
| tggatgaccg | gacgggggtc | gtctaccaga | tcgaaggcag | caaagccgtg | ccctgggtga | 840 |
| ttctgtccga | cggcgacggc | accgtggaga | aaggcttcaa | ggccgaatgg | ctggcagtga | 900 |
| aggacgagcg | tctgtacgtg | ggcggcctgg | gcaaggagtg | gacgaccact | acgggtgatg | 960 |
| tgggtgaacga | gaacccggag | tgggtgaagg | tgggtgggcta | caagggcagc | gtggaccacg | 1020 |
| agaactgggt | gtccaaactac | aacgccctgc | gggtgtgtgc | cggcattccag | ccgccagcta | 1080 |
| acctcatcca | tgagtctgcc | tgctggagtg | acacgctgca | gcgctgggtc | ttcctgccgc | 1140 |
| gccgcgccag | ccaggagcgc | tacagcgaga | aggacgacga | gcgcaagggc | gccaacctgc | 1200 |
| tgctgagcgc | ctccccctgac | ttcggcgaca | tcgctgtgag | ccacgtcggg | gcggtgggtc | 1260 |
| ccactcacgg | cttctcgtcc | ttcaagttca | ttcccaaacac | cgacgaccag | atcattgtgg | 1320 |
| ccctcaaate | cgaggaggac | agcggcagag | tcgcctccta | catcatggcc | ttcacgctgg | 1380 |
| acgggcgctt | cctgttgccg | gagaccaaga | tcggaagcgt | gaaatacgaa | ggcatcgagt | 1440 |
| tcatttaact | caaaaacggaa | acactgagca | aggccatcag | gactcagctt | ttataaaaac | 1500 |
| aagaggagtg | cactttttgtt | ttgttttgtt | ctgttttgaa | ctgtgcctgg | gttgagggtc | 1560 |
| tggacaggga | gcccagtcct | gggccccata | gtggtgcggg | cactggaccc | ccgggccccca | 1620 |
| cggaggccgc | ggtctgaact | gctttccatg | ctgccatctg | gtggtgattt | cggtcacttc | 1680 |
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 <213> homo sapiens

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| cagcggttca | aggctgtgtc | tgccaagagc | aaggaagacc | tgggtgtcca | gggcttctact | 420 |
| gaattcacaa | ttgaggattt | ccacaacacg | ttcatggacc | tgattgagca | ggtggagaag | 480 |
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| gtggtctacc | tgcggctgct | cacctcgggc | tacctgcagc | gcgagagcaa | gttcttcgag | 600 |
| cacttcatcg | aggggtggacg | gactgtcaag | gagttctgcc | agcaggaggt | ggagcccatg | 660 |
| tgcaaggaga | gcgaccacat | ccacatcatt | gcgctggccc | aggccctcag | cgtgtccatc | 720 |
| caggtggagt | acatggaccg | cggcgagggc | ggcaccacca | atccgcacat | cttccttgag | 780 |
| ggctccgagc | ccaaggtcta | ccttctctac | cggcctggac | actacgatat | cctctacaaa | 840 |
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 <212> DNA
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<400> 613

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| acatgcctct | accaatggac | agctctcagt | ccacactccc | aaaagggaaa | gtttgtcca | 120 |
| tgaggagcac | ccccatagcc | atcctctcta | tggacatggt | gtatgcaagt | ggccaggctg | 180 |
| tgaagcagtg | tgcgaagatt | tccaatcatt | tctaaaacat | ctcaacagtg | agcatgcgct | 240 |
| ggacgataga | agtacagccc | aatgtagagt | acaaatgcag | gttgtagagc | agttagagct | 300 |
| acagcttgca | aaagacaaag | agcgctgca | agccatgatg | acccacctgc | atgtgaagtc | 360 |
| tacagaacct | aaagccgccc | ctcagccctt | gaatctggta | tcaagtgtca | ctctctccaa | 420 |
| gtccgcatcg | gaggcttctc | cacagagctt | acctcatact | ccaacgaccc | caaccgcccc | 480 |
| cctgactccc | gtcacccaag | gccccctctg | catcacaaac | accagcatgc | acacgggtggg | 540 |
| acccatccgc | aggcggtagt | cagacaaata | caacgtgccc | atttcgtcag | cagatattgc | 600 |
| gcagaaccaa | gaattttata | agaacgcaga | agtttagacca | ccatttacat | atgcatcttt | 660 |
| aattaggcag | gccattctcg | aatctccaga | aaagcagcta | acactaaatg | agatctataa | 720 |
| ctggttcaca | cgaatgtttg | cttacttccg | acgcaacgcg | gccacgtgga | agaatgcagt | 780 |
| gcgtcataat | cttagtcttc | acaagtgttt | tgtgcgagta | gaaaacgtta | aaggggcagt | 840 |
| atggacagtg | gatgaagtag | aattccaaaa | acgaaggcca | caaaagatca | gtggtaaccc | 900 |
| ttcccttatt | aaaaacatgc | agagcagcca | cgccacttgc | acacctctca | atgcagcttt | 960 |
| acaggcttca | atggctgaga | atagtatacc | tctatacact | accgcttcca | tgggaaatcc | 1020 |
| cactctgggc | aacttagcca | gcgcaatacg | ggaagagctg | aacggggcaa | tggagcatac | 1080 |
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| acacgtcaaa | gaagagcccc | tcgatccaga | ggaagctgaa | gggccccctg | ccttagtgac | 1200 |
| aacagccaac | cacagtccag | attttgacca | tgacagagat | tacgaagatg | aaccagtaaa | 1260 |
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<400> 614

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| accgagcgtg | ctgagcaacc | gcagcctccg | cggccgagag | tgcagcgagc | aaggggacaa | 120 |
| aaagtccgc | aaagcccgca | caaccagcac | cacagagaga | agggagaagc | ggcatccagc | 180 |
| ccaccagaaa | tggaccgaca | cacctcagca | tctccaaacc | ccgcagcaca | cgtagaccata | 240 |
| aaccagcaaa | gatgagtttt | gatcatcctg | agaaaaatgg | gccttggcct | gcagacccaa | 300 |
| taaaccttcc | ctcccatgga | taatagtgtc | aattcctgag | gacctgaagg | gcctgcccgc | 360 |
| cctgggggat | tagccagaag | caggcttggt | ttcctgctca | gaacaaagtg | acttccctga | 420 |
| acacatcttc | attatgattc | acaccaacct | gaagaaaaag | ttcagctgct | gcgtcctggt | 480 |

| | | | | | | |
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| ttccttttaa | ttgcaaacca | aggaattcca | ggtgttaaag | agtctgggga | aattggccat | 600 |
| ggggtctgat | tcccagctcg | tatcctcaag | cagcaccag | gacccccaca | ggggccgcca | 660 |
| gaccctcggc | agtctcagag | gcctagccaa | ggccaaacca | gaggcctcct | tccaggtgtg | 720 |
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| ccaactaggg | agagaaatcg | atgatcatga | cgcagtcctg | aggtttaatg | gggcaccacc | 1080 |
| agccaacttc | caacaagatg | tgggcacaaa | aactaccatt | cgctgatga | actctcagtt | 1140 |
| ggttaccaca | gagaagcgct | tctcaaaaga | cagtttgtag | aatgaaggaa | tcctaattgt | 1200 |
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| gcctgtgggtc | aggaaatcag | gtccagcctt | ccctgtagcc | agacagttta | tgagcccaga | 1860 |
| gcctcctgcc | acacacatgc | acacatatct | agcattcttt | ccagacagca | tcctccccgc | 1920 |
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| aagtgtgtgc | caggccaaca | ctttggtaaa | atgcaaat | tgatatggac | gttatcattg | 4200 |
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| | | | | | |
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<400> 615

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| atgtccgctt | atgccttctt | tgtgcagaca | tgcagagaag | aacataagaa | gaaaaacca | 180 |
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| cgggaaatga | aggattatgg | accagctaag | ggaggcaaga | agaagaagga | tcctaattgct | 360 |
| cccaaaaggc | caccgtctgg | attcttctcg | ttctgttcag | aattccgccc | caagatcaaa | 420 |
| tccacaaacc | ccggcatctc | tattggagac | gtggcaaaaa | agctgggtga | gatgtggaat | 480 |
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| ggggggggggg | gggggacgta | tagtcgggtc | ggctgggtga | gtagcccaaa | agaaggggag | 720 |
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| tacatgaagt | ggccatgggt | gtctggagca | ccctgaaact | gtatcaaagt | tgtacatatt | 900 |
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| ttgtcagcaa | agcaaagagt | cactgcatca | atgaaagtcc | aagaacctcc | tgtacttaaa | 1440 |
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| cggagcaccc | atgtgtatcc | cctgtctcta | atcatgttta | tgagcggcgg | ctcatcgaga | 300 |
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| tcacgcagcat | caaagttgct | cacccaatcc | ggcccaagcc | tccctcagcc | accagcatcc | 420 |
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| cgcttgccgt | gtcattgccc | gtctcaccaa | ggaagtcaact | gctgcccag | aagctctggc | 600 |
| tacctgaaa | ccacaggctg | gcctcattgt | gccccaggct | gtgccaagt | cccaaccaag | 660 |
| tgttgtgggt | gcgggtgagc | caatggattt | gggtgagctg | gtgggaatga | ccccagagat | 720 |
| tattcagaag | cttcaagaca | aagccactgt | gctaaccacg | gagcgcaaga | agagagggaa | 780 |
| gactgtgcct | gaggagctgg | tgaagccaga | agagctcagc | aaataccggc | aggtggcatc | 840 |


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| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Ala | Thr | Ser | Thr | Gly | Leu | Pro | Asp | Thr | Pro | Ala | Ala | Pro | Glu | Thr | Ser |
| | | | 20 | | | | | 25 | | | | | 30 | | |

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|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Thr | Asn | Tyr 35 | Pro | Val | Glu | Cys | Thr 40 | Glu | Gly | Ser | Ala | Gly 45 | Pro | Gln | Ser |
| Leu | Pro 50 | Leu | Pro | Ile | Leu | Glu 55 | Pro | Val | Lys | Asn | Pro 60 | Cys | Ser | Val | Lys |
| Asp 65 | Gln | Thr | Pro | Leu | Gln 70 | Leu | Ser | Val | Glu | Asp 75 | Thr | Thr | Ser | Pro | Asn 80 |
| Thr | Lys | Pro | Cys | Pro 85 | Pro | Thr | Pro | Thr | Thr 90 | Pro | Glu | Thr | Trp | Gly 95 | Gly |
| Gly | Gly | Gly | Gly 100 | Ala | Pro | Ser | Ser | Thr 105 | Pro | Cys | Ser | Ala | His 110 | Leu | Thr |
| Pro | Ser | Ser 115 | Leu | Phe | Pro | Ser | Ser 120 | Leu | Glu | Ser | Ser | Ser 125 | Glu | Gln | Lys |
| Phe | Tyr 130 | Asn | Phe | Val | Ile | Leu 135 | His | Ala | Arg | Ala | Asp 140 | Glu | His | Ile | Ala |
| Leu 145 | Arg | Val | Arg | Glu | Lys 150 | Leu | Glu | Ala | Leu | Gly 155 | Val | Pro | Asp | Gly | Ala 160 |
| Thr | Phe | Cys | Glu | Asp 165 | Phe | Gln | Val | Pro | Gly 170 | Arg | Gly | Glu | Leu | Ser 175 | Cys |
| Leu | Gln | Asp | Ala 180 | Ile | Asp | His | Ser | Ala 185 | Phe | Ile | Ile | Leu | Leu 190 | Leu | Thr |
| Ser | Asn | Phe 195 | Asp | Cys | Arg | Leu | Ser 200 | Leu | His | Gln | Val | Asn 205 | Gln | Ala | Met |
| Met | Ser 210 | Asn | Leu | Thr | Arg | Gln 215 | Gly | Ser | Pro | Asp | Cys 220 | Val | Ile | Pro | Phe |
| Leu 225 | Pro | Leu | Glu | Ser | Ser 230 | Pro | Ala | Gln | Leu | Ser 235 | Ser | Asp | Thr | Ala | Ser 240 |
| Leu | Leu | Ser | Gly | Leu 245 | Val | Arg | Leu | Asp | Glu 250 | His | Ser | Gln | Ile | Phe 255 | Ala |
| Arg | Lys | Val | Ala 260 | Asn | Thr | Phe | Lys | Pro 265 | His | Arg | Leu | Gln | Ala 270 | Arg | Lys |
| Ala | Met | Trp 275 | Arg | Lys | Glu | Gln | Asp 280 | Thr | Arg | Ala | Leu | Arg 285 | Glu | Gln | Ser |
| Gln | His 290 | Leu | Asp | Gly | Glu | Arg 295 | Met | Gln | Ala | Ala | Ala 300 | Leu | Asn | Ala | Ala |
| Tyr 305 | Ser | Ala | Tyr | Leu | Gln 310 | Ser | Tyr | Leu | Ser | Tyr 315 | Gln | Ala | Gln | Met | Glu 320 |
| Gln | Leu | Gln | Val | Ala 325 | Phe | Gly | Ser | His | Met 330 | Ser | Phe | Gly | Thr | Gly 335 | Ala |
| Pro | Tyr | Gly | Val 340 | Arg | Met | Pro | Phe | Gly 345 | Gly | Gln | Gly | Pro | Leu 350 | Gly | Ala |
| Pro | Pro | Pro 355 | Phe | Pro | Thr | Trp | Pro 360 | Gly | Cys | Pro | Gln | Pro 365 | Pro | Pro | Leu |

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|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| His | Ala | Trp | Gln | Ala | Gly | Thr | Pro | Pro | Pro | Pro | Ser | Pro | Gln | Pro | Ala |
| | 370 | | | | | 375 | | | | | 380 | | | | |
| Ala | Phe | Pro | Gln | Ser | Leu | Pro | Phe | Pro | Gln | Ser | Pro | Ala | Phe | Pro | Thr |
| 385 | | | | | 390 | | | | | 395 | | | | | 400 |
| Ala | Ser | Pro | Ala | Pro | Pro | Gln | Ser | Pro | Gly | Leu | Gln | Pro | Leu | Ile | Ile |
| | | | | 405 | | | | | 410 | | | | | 415 | |
| His | His | Ala | Gln | Met | Val | Gln | Leu | Gly | Leu | Asn | Asn | His | Met | Trp | Asn |
| | | | 420 | | | | | 425 | | | | | 430 | | |
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<400> 619

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| Glu | Leu | Leu | Val | Leu | Pro | Gly | Thr | Asp | Gly | Ala | Ala | Pro | Gly | Gly | Phe |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Trp | Glu | Pro | His | Val | Ile | Trp | Asp | Trp | Gly | Ala | Leu | Trp | Gly | Gln | Asn |
| | | 35 | | | | | 40 | | | | | 45 | | | |
| Ala | Leu | Trp | Gly | Pro | Gly | Ala | Pro | Gly | Ser | Pro | Ala | Thr | Leu | Ser | His |
| | 50 | | | | | 55 | | | | | 60 | | | | |
| Leu | Ala | Gly | Val | Pro | Ala | Ala | Ala | Thr | Pro | Ala | Arg | Met | Ala | Gly | Trp |
| 65 | | | | | 70 | | | | | 75 | | | | | 80 |
| His | Pro | Pro | Thr | Ala | Leu | Pro | Thr | Ala | Ser | Ser | Leu | Ser | Thr | Val | Thr |
| | | | | 85 | | | | | 90 | | | | | 95 | |
| Ala | Leu | Pro | Ala | Val | Pro | Ser | Leu | Pro | Tyr | Gly | Leu | Thr | Arg | Thr | Pro |
| | | | 100 | | | | | 105 | | | | | 110 | | |
| Ser | Glu | Pro | Arg | Ala | Ala | Thr | Pro | His | Tyr | Pro | Pro | Arg | Thr | Asp | Gly |
| | | 115 | | | | | 120 | | | | | 125 | | | |
| Thr | Ala | Gly | Ala | Glu | Gln | Pro | His | Val | Glu | Pro | Glu | Arg | Val | Pro | Gly |
| | 130 | | | | | 135 | | | | | 140 | | | | |
| Ala | Arg | Gly | Gln | Asp | Ala | Gly | Gly | Arg | Met | Thr | Ala | Cys | Pro | Cys | Leu |
| 145 | | | | | 150 | | | | | 155 | | | | | 160 |
| Thr | Thr | Trp | Gly | Thr | Pro | Leu | Asp | Pro | Gly | Ile | Gly | Gln | Asp | Pro | Ile |
| | | | | 165 | | | | | 170 | | | | | 175 | |
| Glu | His | Pro | Gly | Leu | Pro | Cys | Ala | Leu | Trp | Thr | Val | Glu | Asp | Glu | Val |
| | | | 180 | | | | | 185 | | | | | 190 | | |
| Ile | Cys | His | Phe | Gln | Asp | Ile | Val | Arg | Glu | Pro | Phe | Ile | | | |
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| Pro | Glu | Trp | Asn 20 | Glu | Ser | Met | His | Ser 25 | Leu | Arg | Ile | Ser | Val 30 | Gly | Gly | |
| Leu | Pro | Val 35 | Leu | Ala | Ser | Met | Thr 40 | Lys | Ala | Ala | Asp | Pro 45 | Arg | Phe | Arg | |
| Pro | Arg 50 | Trp | Lys | Val | Ile | Leu 55 | Thr | Phe | Phe | Val | Gly 60 | Ala | Ala | Ile | Leu | |
| Trp 65 | Leu | Leu | Cys | Ser | His 70 | Arg | Pro | Ala | Pro | Gly 75 | Arg | Pro | Pro | Thr | His 80 | |
| Asn | Ala | His | Asn | Trp 85 | Arg | Leu | Gly | Gln | Ala 90 | Pro | Ala | Asn | Trp | Tyr 95 | Asn | |
| Asp | Thr | Tyr | Pro 100 | Leu | Ser | Pro | Pro | Gln 105 | Arg | Thr | Pro | Ala | Gly 110 | Ile | Arg | |
| Tyr | Arg | Ile 115 | Ala | Val | Ile | Ala | Asp 120 | Leu | Asp | Thr | Glu | Pro 125 | Thr | Ala | Gln | |
| Asp | Glu 130 | Asn | Thr | Trp | Arg | Ser 135 | Asp | Leu | Lys | Lys | Gly 140 | Tyr | Leu | Thr | Leu | |
| Ser 145 | Asp | Ser | Gly | Asp | Lys 150 | Val | Ala | Val | Glu | Trp 155 | Asp | Lys | Asp | His | Gly 160 | |
| Val | Leu | Glu | Ser | His 165 | Leu | Ala | Glu | Lys | Gly 170 | Arg | Gly | Met | Glu | Leu 175 | Ser | |
| Asp | Leu | Ile | Val 180 | Phe | Asn | Gly | Lys | Leu 185 | Tyr | Ser | Val | Asp | Asp 190 | Arg | Thr | |
| Gly | Val | Val 195 | Tyr | Gln | Ile | Glu | Gly 200 | Ser | Lys | Ala | Val | Pro 205 | Trp | Val | Ile | |
| Leu | Ser 210 | Asp | Gly | Asp | Gly | Thr 215 | Val | Glu | Lys | Gly | Phe 220 | Lys | Ala | Glu | Trp | |
| Leu 225 | Ala | Val | Lys | Asp | Glu 230 | Arg | Leu | Tyr | Val | Gly 235 | Gly | Leu | Gly | Lys | Glu 240 | |
| Trp | Thr | Thr | Thr | Thr 245 | Gly | Asp | Val | Val | Asn 250 | Glu | Asn | Pro | Glu | Trp 255 | Val | |
| Lys | Val | Val | Gly 260 | Tyr | Lys | Gly | Ser | Val 265 | Asp | His | Glu | Asn | Trp 270 | Val | Ser | |
| Asn | Tyr | Asn 275 | Ala | Leu | Arg | Ala | Ala 280 | Ala | Gly | Ile | Gln | Pro 285 | Pro | Ala | Asn | |
| Leu | Ile 290 | His | Glu | Ser | Ala | Cys 295 | Trp | Ser | Asp | Thr | Leu 300 | Gln | Arg | Trp | Phe | |

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|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Phe 305 | Leu | Pro | Arg | Arg | Ala 310 | Ser | Gln | Glu | Arg | Tyr 315 | Ser | Glu | Lys | Asp | Asp 320 |
| Glu | Arg | Lys | Gly | Ala 325 | Asn | Leu | Leu | Leu | Ser 330 | Ala | Ser | Pro | Asp | Phe 335 | Gly |
| Asp | Ile | Ala | Val 340 | Ser | His | Val | Gly | Ala 345 | Val | Val | Pro | Thr | His 350 | Gly | Phe |
| Ser | Ser | Phe 355 | Lys | Phe | Ile | Pro | Asn 360 | Thr | Asp | Asp | Gln | Ile 365 | Ile | Val | Ala |
| Leu | Lys 370 | Ser | Glu | Glu | Asp | Ser 375 | Gly | Arg | Val | Ala | Ser 380 | Tyr | Ile | Met | Ala |
| Phe 385 | Thr | Leu | Asp | Gly | Arg 390 | Phe | Leu | Leu | Pro | Glu 395 | Thr | Lys | Ile | Gly | Ser 400 |
| Val | Lys | Tyr | Glu | Gly 405 | Ile | Glu | Phe | Ile | | | | | | | |

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| Lys 1 | Leu | Ser | Pro | Asp 5 | Gly | Leu | Ala | Gln | Cys 10 | Phe | Arg | Phe | Glu | Leu 15 | Asn |
| Glu | Leu | Asp | Ala 20 | Phe | Val | Phe | His | Ala 25 | Ser | Asp | Leu | Gly | Leu 30 | Arg | Gln |
| Gln | Glu | Ala 35 | Pro | Val | Gln | Arg | Glu 40 | Gly | His | Asp | Val | Gly 45 | Gly | Asp | Ser |
| Ala 50 | Ala | Val | Leu | Leu | Gly | Phe 55 | Glu | Gly | His | Asn | Asp 60 | Leu | Val | Val | Gly |
| Val 65 | Gly | Asp | Glu | Leu | Glu 70 | Gly | Arg | Glu | Ala | Val 75 | Ser | Gly | Asp | His | Arg 80 |
| Pro | Asp | Val | Ala | His 85 | Ser | Asp | Val | Ala | Glu 90 | Val | Arg | Gly | Gly | Ala 95 | Gln |
| Gln | Gln | Val | Gly 100 | Ala | Leu | Ala | Leu | Val 105 | Val | Leu | Leu | Ala | Val 110 | Ala | Leu |
| Leu | Ala | Gly 115 | Ala | Ala | Arg | Gln | Glu 120 | Glu | Pro | Ala | Leu | Gln 125 | Arg | Val | Thr |
| Pro 130 | Ala | Gly | Arg | Leu | Met | Asp 135 | Glu | Val | Ser | Trp | Arg 140 | Leu | Asp | Ala | Gly |
| Ser 145 | Ser | Pro | Gln | Gly | Val 150 | Val | Val | Gly | His | Pro 155 | Val | Leu | Val | Val | His 160 |
| Ala | Ala | Leu | Val | Ala 165 | His | His | Leu | His | Pro 170 | Leu | Arg | Val | Leu | Val 175 | His |
| His | Ile | Thr | Arg 180 | Ser | Gly | Arg | Pro | Leu 185 | Leu | Ala | Gln | Ala | Ala 190 | His | Val |

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gln | Thr | Leu | Val | Leu | His | Cys | Gln | Pro | Phe | Gly | Leu | Glu | Ala | Phe | Leu |
| | | 195 | | | | | 200 | | | | | 205 | | | |
| His | Gly | Ala | Val | Ala | Val | Gly | Gln | Asn | His | Pro | Gly | His | Gly | Phe | Ala |
| | 210 | | | | | 215 | | | | | 220 | | | | |
| Ala | Phe | Asp | Leu | Val | Asp | Asp | Pro | Arg | Pro | Val | Ile | His | Gly | Val | Glu |
| 225 | | | | | 230 | | | | | 235 | | | | | 240 |
| Phe | Pro | Ile | Glu | Asn | Asn | Gln | Val | Gly | | | | | | | |
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<212> PRT

<213> homo sapiens

<400> 622

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| Ala | Ala | Ala | Pro | Val | Ser | Leu | His | Asp | Ala | Ala | Gly | Asp | Leu | Arg | Arg |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Asp | Pro | Gly | Gly | Gly | Gly | Gly | Gly | Gly | Val | Pro | His | Gly | Gly | Gly | Glu |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Gly | Gln | Glu | Val | Val | Pro | Ala | Glu | Pro | Gly | Val | Pro | Ala | Pro | Gln | His |
| | | 35 | | | | | 40 | | | | | 45 | | | |
| Ala | Glu | Pro | Val | Ala | Ala | Ala | Gly | Ala | Ala | Gln | Gln | Leu | Gln | Thr | Glu |
| | 50 | | | | | 55 | | | | | 60 | | | | |
| Glu | Gln | Pro | Gly | Leu | Gln | Arg | Leu | Arg | Leu | Gly | Pro | Val | Arg | Gly | Ala |
| 65 | | | | | 70 | | | | | 75 | | | | | 80 |
| Ala | Arg | Gly | Gly | Asp | Ala | Arg | Val | Arg | Gly | Pro | Arg | Gly | Asp | Arg | Arg |
| | | | | 85 | | | | | 90 | | | | | 95 | |
| Val | Asn | Pro | Glu | Ser | Ala | Arg | Ala | Leu | Leu | Pro | Gly | Asp | Pro | Gln | Gly |
| | | | 100 | | | | | 105 | | | | | 110 | | |
| Pro | Gly | Thr | Ala | Ala | Pro | Arg | Ala | Leu | Gly | Leu | Pro | Pro | Arg | Cys | Glu |
| | | 115 | | | | | 120 | | | | | 125 | | | |
| Pro | Val | Gly | Ala | Pro | Leu | Ala | Ala | Leu | Ala | Leu | Ala | Arg | Glu | Arg | Arg |
| | 130 | | | | | 135 | | | | | 140 | | | | |
| Glu | Arg | Gly | Arg | Phe | Pro | Arg | Pro | Cys | Lys | Cys | Leu | Phe | Phe | Asn | Ser |
| 145 | | | | | 150 | | | | | 155 | | | | | 160 |
| Ser | Gln | Cys | Glu | Leu | Cys | Cys | Glu | Cys | Val | Arg | Gly | Gly | Ala | Pro | Ala |
| | | | | 165 | | | | | 170 | | | | | 175 | |
| Leu | Ser | Arg | Arg | Arg | Val | Ala | Thr | Pro | Cys | Pro | Cys | Pro | Met | Val | Cys |
| | | | 180 | | | | | 185 | | | | | 190 | | |
| Asn | Ser | Asp | Phe | Ala | His | Arg | Ser | Thr | Val | Pro | Pro | Ser | Ala | His | Pro |
| | | 195 | | | | | 200 | | | | | 205 | | | |
| Phe | Thr | Leu | Thr | Pro | Thr | Leu | Ser | Leu | Asn | Thr | Phe | Ile | Ile | Val | Arg |
| | 210 | | | | | 215 | | | | | 220 | | | | |
| Arg | Gly | Arg | Trp | Asp | Phe | Gly | Arg | Ser | Ala | Ala | Ala | Thr | Ala | Ser | Gly |

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 225 | | | | | 230 | | | | | | 235 | | | | 240 |
| Gly | Leu | Ile | Phe | Ile | Phe | Ala | Leu | Arg | Trp | Leu | Lys | Ala | Phe | Ile | |
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 <212> PRT
 <213> homo sapiens

<400> 623

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| Ile | Asn | Ala | Phe | Ser | His | Arg | Asn | Ala | Lys | Ile | Asn | Ile | Asn | Pro | Pro |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Asp | Ala | Val | Ala | Ala | Ala | Leu | Arg | Pro | Lys | Ser | Gln | Arg | Pro | Arg | Leu |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Thr | Ile | Ile | Lys | Val | Phe | Ser | Glu | Ser | Val | Gly | Val | Ser | Val | Asn | Gly |
| | | 35 | | | | | 40 | | | | | 45 | | | |
| Cys | Ala | Leu | Gly | Gly | Thr | Val | Glu | Arg | Cys | Ala | Lys | Ser | Glu | Leu | Gln |
| | 50 | | | | | 55 | | | | | 60 | | | | |
| Thr | Ile | Gly | Gln | Gly | His | Gly | Val | Ala | Thr | Arg | Arg | Arg | Leu | Ser | Ala |
| 65 | | | | | 70 | | | | | 75 | | | | | 80 |
| Gly | Ala | Pro | Pro | Arg | Thr | His | Ser | Gln | Gln | Ser | Ser | His | Trp | Glu | Glu |
| | | | | 85 | | | | | 90 | | | | | 95 | |
| Leu | Lys | Asn | Lys | His | Leu | Gln | Gly | Arg | Gly | Lys | Arg | Pro | Arg | Ser | Arg |
| | | | 100 | | | | | 105 | | | | | 110 | | |
| Arg | Ser | Arg | Ala | Arg | Ala | Ser | Ala | Ala | Arg | Gly | Ala | Pro | Thr | Gly | Ser |
| | | 115 | | | | | 120 | | | | | 125 | | | |
| Gln | Arg | Gly | Gly | Ser | Pro | Ser | Ala | Arg | Gly | Ala | Ala | Val | Pro | Gly | Pro |
| | 130 | | | | | 135 | | | | | 140 | | | | |
| Cys | Gly | Ser | Pro | Gly | Ser | Arg | Ala | Arg | Ala | Leu | Ser | Gly | Phe | Thr | Arg |
| 145 | | | | | 150 | | | | | 155 | | | | | 160 |
| Arg | Ser | Pro | Arg | Gly | Pro | Arg | Thr | Arg | Ala | Ser | Pro | Pro | Arg | Ala | Ala |
| | | | | 165 | | | | | 170 | | | | | 175 | |
| Pro | Leu | Thr | Gly | Pro | Ser | Arg | Ser | Arg | Trp | Ser | Pro | Gly | Cys | Ser | Ser |
| | | | 180 | | | | | 185 | | | | | 190 | | |
| Val | Cys | Ser | Cys | | | | | | | | | | | | |
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<210> 624
 <211> 242
 <212> PRT
 <213> homo sapiens

<400> 624

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| Val | Glu | Ser | His | Arg | Arg | Ala | His | Thr | His | Thr | Thr | Val | Arg | Ser | Pro |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Glu | Thr | Ala | Arg | Gly | Trp | Lys | Pro | Trp | Pro | His | Arg | Leu | Ser | Arg | Tyr |
| | | | 20 | | | | | 25 | | | | | 30 | | |

| | | | | | | | | | | | | | | | |
|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Val | His | Ser 35 | Pro | Gly | Arg | Gln | Pro 40 | His | Gly | His | Gly | Gln 45 | His | Leu | Cys |
| Phe | Cys 50 | Ser | Gly | Arg | Arg | Ala 55 | Phe | Gly | Gly | His | Pro 60 | Arg | Gln | Gly | Ala |
| Arg 65 | Ala | Ser | Leu | Leu | Ala 70 | Leu | Gly | Leu | Glu | Asn 75 | Ser | Pro | Gly | Gly | Ser 80 |
| Ser | Pro | Glu | Glu | Arg 85 | Leu | Gly | Arg | Leu | Ala 90 | Val | Ala | Gly | Pro | Pro 95 | Arg |
| Gly | Ala | Gln | Asn 100 | Val | Ser | Gln | Ala | Gly 105 | Pro | Glu | Ala | Glu | Ala 110 | Pro | Pro |
| Leu | Arg | Phe 115 | Gly | His | Ala | Trp | Gly 120 | Ala | Gln | Thr | Pro | Arg 125 | Leu | Gly | Ala |
| Pro | Gly 130 | Pro | Trp | Thr | Pro | Leu 135 | Pro | Thr | Leu | Pro | Ser 140 | His | Ile | Pro | Pro |
| Phe 145 | Trp | Ser | Gln | Thr | Pro 150 | Ala | Gln | Arg | Lys | Glu 155 | Gly | Phe | Thr | Glu | Glu 160 |
| Gly | Gln | Gly | Arg | Ala 165 | Trp | Pro | Gln | Gly | Gly 170 | Asp | Glu | Asp | Ile | Ser 175 | Gly |
| Pro | Gly | Ser | Cys 180 | Arg | Leu | Leu | Trp | Glu 185 | Glu | Glu | Pro | Cys | Val 190 | Cys | Lys |
| Leu | Leu | Gly 195 | Leu | Ala | Ala | Arg | Pro 200 | Thr | Ala | Gly | Pro | Ser 205 | Leu | Asp | Pro |
| Cys | Thr 210 | Trp | Pro | Ser | Ser | Cys 215 | Pro | Leu | Ala | Ala | Pro 220 | Gly | Leu | Gly | Thr |
| Gly 225 | Ile | Glu | Pro | Arg | Gly 230 | Leu | Gly | Trp | Leu | Gly 235 | Gln | Gly | Arg | Asp | Arg 240 |

Glu Gly

<210> 625
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<212> PRT
<213> homo sapiens

<400> 625

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| Gly 1 | Leu | Val | Met | Pro 5 | Gly | Glu | Leu | Arg | Arg 10 | Pro | Gly | Leu | Gly | Pro 15 | Gln |
| Ala | His | Gly | Leu 20 | Pro | Ser | Pro | Leu | Cys 25 | Pro | Pro | Ile | Phe | Pro 30 | Leu | Phe |
| Gly | Pro | Arg 35 | His | Gln | His | Lys | Glu 40 | Arg | Arg | Gly | Ser | Gln 45 | Arg | Lys | Ala |
| Arg | Ala 50 | Glu | Pro | Gly | Pro | Arg 55 | Glu | Gly | Met | Arg | Thr 60 | Phe | Pro | Val | Gln |
| Val 65 | Ala | Ala | Gly | Cys | Ser 70 | Gly | Arg | Lys | Ser | His 75 | Ala | Ser | Val | Asn | Cys 80 |

| | | | | | | | | | | | | | | | |
|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Trp | Gly | Trp | Arg | Pro 85 | Ala | Pro | Leu | Gln | Gly 90 | Pro | Ala | Leu | Thr | Pro 95 | Ala |
| Arg | Gly | His | Pro 100 | Ala | Ala | Leu | Trp | Leu 105 | Pro | Leu | Ala | Leu | Ala 110 | Gln | Ala |
| Ser | Ser | Leu 115 | Glu | Gly | Trp | Ala | Gly 120 | Trp | Ala | Arg | Ala | Gly 125 | Thr | Gly | Arg |
| Gly | Ser 130 | Thr | Ser | Asp | Pro | Asp 135 | Val | Gly | Trp | Leu | Cys 140 | Pro | Pro | Arg | Arg |
| Glu 145 | Ala | Gln | Gln | Thr | Ser 150 | Tyr | Thr | Lys | Ala | Lys 155 | Ser | Thr | Ile | Gly | Glu 160 |
| Pro | Arg | Ser | His | Phe 165 | Met | Gly | Arg | Arg | Pro 170 | Arg | Pro | Gln | Gly | Pro 175 | Gln |
| Ser | Lys | Ala | Arg 180 | Gly | Arg | Phe | Ile | Pro 185 | Glu | Asp | Ser | Pro | Pro 190 | Gly | Ala |
| Ala | Pro | Ala 195 | Trp | Gly | Gly | Val | Ser 200 | Arg | Pro | Leu | Gly | Cys 205 | Leu | Ser | Val |
| Cys | Gly 210 | Thr | Pro | Trp | Ser | Thr 215 | Pro | | | | | | | | |

<210> 626
 <211> 299
 <212> PRT
 <213> homo sapiens

<400> 626

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| Pro 1 | Gly | Ile | Ser | Val 5 | Ser | Val | Asp | Lys | Met 10 | Glu | Ser | Ser | Pro | Phe 15 | Asn |
| Arg | Arg | Gln | Trp 20 | Thr | Ser | Leu | Ser | Leu 25 | Arg | Val | Thr | Ala | Lys 30 | Glu | Leu |
| Ser | Leu | Val 35 | Asn | Lys | Asn | Lys | Ser 40 | Ser | Ala | Ile | Val | Glu 45 | Ile | Phe | Ser |
| Lys | Tyr 50 | Gln | Lys | Ala | Ala | Glu 55 | Glu | Thr | Asn | Met | Glu 60 | Lys | Lys | Arg | Ser |
| Asn 65 | Thr | Glu | Asn | Leu | Ser 70 | Gln | His | Phe | Arg | Lys 75 | Gly | Thr | Leu | Thr | Val 80 |
| Leu | Lys | Lys | Lys | Trp 85 | Glu | Asn | Pro | Gly | Leu 90 | Gly | Ala | Glu | Ser | His 95 | Thr |
| Asp | Ser | Leu | Arg 100 | Asn | Ser | Ser | Thr | Glu 105 | Ile | Arg | His | Arg | Ala 110 | Asp | His |
| Pro | Pro | Ala 115 | Glu | Val | Thr | Ser | His 120 | Ala | Ala | Ser | Gly | Ala 125 | Lys | Ala | Asp |
| Gln | Glu 130 | Glu | Gln | Ile | His | Pro 135 | Arg | Ser | Arg | Leu | Arg 140 | Ser | Pro | Pro | Glu |
| Ala | Leu | Val | Gln | Gly | Arg | Tyr | Pro | His | Ile | Lys | Asp | Gly | Glu | Asp | Leu |

| | | | | | | | | | | | | | | | |
|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| 145 | | | | | 150 | | | | | 155 | | | | | 160 |
| Lys | Asp | His | Ser | Thr 165 | Glu | Ser | Lys | Lys | Met 170 | Glu | Asn | Cys | Leu | Gly 175 | Glu |
| Ser | Arg | His | Glu 180 | Val | Glu | Lys | Ser | Glu 185 | Ile | Ser | Glu | Asn | Thr 190 | Asp | Ala |
| Ser | Gly | Lys 195 | Ile | Glu | Lys | Tyr | Asn 200 | Val | Pro | Leu | Asn | Arg 205 | Leu | Lys | Met |
| Met | Phe 210 | Glu | Lys | Gly | Glu | Pro 215 | Thr | Gln | Thr | Lys | Ile 220 | Leu | Arg | Ala | Gln |
| Ser 225 | Arg | Ser | Ala | Ser | Gly 230 | Arg | Lys | Ile | Ser | Glu 235 | Asn | Ser | Tyr | Ser | Leu 240 |
| Asp | Asp | Leu | Glu | Ile 245 | Gly | Pro | Gly | Gln | Leu 250 | Ser | Ser | Ser | Thr | Phe 255 | Asp |
| Ser | Glu | Lys | Asn 260 | Glu | Ser | Arg | Arg | Asn 265 | Leu | Glu | Leu | Pro | Arg 270 | Leu | Ser |
| Glu | Thr | Ser 275 | Ile | Lys | Asp | Arg | Met 280 | Ala | Lys | Tyr | Gln | Ala 285 | Ala | Val | Ser |
| Lys | Gln 290 | Ser | Ser | Ser | Pro | Thr 295 | Ile | Pro | Met | Ser | | | | | |

<210> 627
 <211> 94
 <212> PRT
 <213> homo sapiens

<400> 627

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| Asp 1 | Ser | Ala | Pro | Ser 5 | Pro | Gly | Phe | Ser | His 10 | Phe | Phe | Phe | Asn | Thr 15 | Val |
| Arg | Val | Pro | Phe 20 | Leu | Lys | Cys | Trp | Glu 25 | Arg | Phe | Ser | Val | Leu 30 | Leu | Leu |
| Phe | Phe | Ser 35 | Met | Phe | Val | Ser | Ser 40 | Ala | Ala | Phe | Trp | Tyr 45 | Leu | Glu | Asn |
| Ile | Ser 50 | Thr | Ile | Ala | Asp | Asp 55 | Leu | Phe | Leu | Leu | Thr 60 | Arg | Glu | Ser | Ser |
| Leu 65 | Ala | Val | Thr | Leu | Asn 70 | Asp | Ser | Glu | Val | His 75 | Cys | Arg | Leu | Leu | Asn 80 |
| Gly | Asp | Asp | Ser | Ile 85 | Leu | Ser | Thr | Asp | Thr 90 | Glu | Ile | Pro | Gly | | |

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 <211> 765
 <212> PRT
 <213> homo sapiens

<400> 628

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| Ile 1 | Arg | Pro | Val | Val 5 | Gln | Leu | Thr | Ala | Ile 10 | Glu | Ile | Leu | Ala | Trp 15 | Gly |
|----------|-----|-----|-----|----------|-----|-----|-----|-----|-----------|-----|-----|-----|-----|-----------|-----|

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Arg | Asn | Met | Lys | Asn | Phe | Gln | Met | Ala | Ser | Ile | Thr | Ser | Pro | Ser |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Leu | Val | Val | Glu | Cys | Gly | Gly | Glu | Arg | Val | Glu | Ser | Val | Val | Ile | Lys |
| | | 35 | | | | | 40 | | | | | 45 | | | |
| Asn | Leu | Lys | Lys | Thr | Pro | Asn | Phe | Pro | Ser | Ser | Val | Leu | Phe | Met | Lys |
| | 50 | | | | | 55 | | | | | 60 | | | | |
| Val | Phe | Leu | Pro | Lys | Glu | Glu | Leu | Tyr | Met | Pro | Pro | Leu | Val | Ile | Lys |
| | 65 | | | | 70 | | | | | 75 | | | | | 80 |
| Val | Ile | Asp | His | Arg | Gln | Phe | Gly | Arg | Lys | Pro | Val | Val | Gly | Gln | Cys |
| | | | | 85 | | | | | 90 | | | | | 95 | |
| Thr | Ile | Glu | Arg | Leu | Asp | Arg | Phe | Arg | Cys | Asp | Pro | Tyr | Ala | Gly | Lys |
| | | | 100 | | | | | 105 | | | | | 110 | | |
| Glu | Asp | Ile | Val | Pro | Gln | Leu | Lys | Ala | Ser | Leu | Leu | Ser | Ala | Pro | Pro |
| | | 115 | | | | | 120 | | | | | 125 | | | |
| Cys | Arg | Asp | Ile | Val | Ile | Glu | Met | Glu | Asp | Thr | Lys | Pro | Leu | Leu | Ala |
| | 130 | | | | | 135 | | | | | 140 | | | | |
| Ser | Lys | Leu | Thr | Glu | Lys | Glu | Glu | Glu | Ile | Val | Asp | Trp | Trp | Ser | Lys |
| | 145 | | | | 150 | | | | | 155 | | | | | 160 |
| Phe | Asp | Ala | Ser | Ser | Gly | Glu | His | Glu | Lys | Cys | Gly | Gln | Tyr | Ile | Gln |
| | | | | 165 | | | | | 170 | | | | | 175 | |
| Lys | Gly | Tyr | Ser | Lys | Leu | Lys | Ile | Tyr | Asn | Cys | Glu | Leu | Glu | Asn | Val |
| | | | 180 | | | | | 185 | | | | | 190 | | |
| Ala | Glu | Phe | Glu | Gly | Leu | Thr | Asp | Phe | Ser | Asp | Thr | Phe | Lys | Leu | Tyr |
| | | 195 | | | | | 200 | | | | | 205 | | | |
| Arg | Gly | Lys | Ser | Asp | Glu | Asn | Glu | Asp | Pro | Ser | Val | Val | Gly | Glu | Phe |
| | 210 | | | | | 215 | | | | | 220 | | | | |
| Lys | Gly | Ser | Phe | Arg | Ile | Tyr | Pro | Leu | Pro | Asp | Asp | Pro | Ser | Val | Pro |
| | 225 | | | | 230 | | | | | 235 | | | | | 240 |
| Ala | Pro | Pro | Arg | Gln | Phe | Arg | Glu | Leu | Pro | Asp | Ser | Val | Pro | Gln | Glu |
| | | | | 245 | | | | | 250 | | | | | 255 | |
| Cys | Thr | Val | Arg | Ile | Tyr | Ile | Val | Arg | Gly | Leu | Glu | Leu | Gln | Pro | Gln |
| | | | 260 | | | | | 265 | | | | | 270 | | |
| Asp | Asn | Asn | Gly | Leu | Cys | Asp | Pro | Tyr | Ile | Lys | Ile | Thr | Leu | Gly | Lys |
| | | 275 | | | | | 280 | | | | | 285 | | | |
| Lys | Val | Ile | Glu | Asp | Arg | Asp | His | Tyr | Ile | Pro | Asn | Thr | Leu | Asn | Pro |
| | 290 | | | | | 295 | | | | | 300 | | | | |
| Val | Phe | Gly | Arg | Met | Tyr | Glu | Leu | Ser | Cys | Tyr | Leu | Pro | Gln | Glu | Lys |
| | 305 | | | | 310 | | | | | 315 | | | | | 320 |
| Asp | Leu | Lys | Ile | Ser | Val | Tyr | Asp | Tyr | Asp | Thr | Phe | Thr | Arg | Asp | Glu |
| | | | | 325 | | | | | 330 | | | | | 335 | |
| Lys | Val | Gly | Glu | Thr | Ile | Ile | Asp | Leu | Glu | Asn | Arg | Phe | Leu | Ser | Arg |
| | | | 340 | | | | | 345 | | | | | 350 | | |

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|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Phe | Gly | Ser 355 | His | Cys | Gly | Ile | Pro 360 | Glu | Glu | Tyr | Cys | Val 365 | Ser | Gly | Val |
| Asn | Thr 370 | Trp | Arg | Asp | Gln | Leu 375 | Arg | Pro | Thr | Gln | Leu 380 | Leu | Gln | Asn | Val |
| Ala 385 | Arg | Phe | Lys | Gly | Phe 390 | Pro | Gln | Pro | Ile | Leu 395 | Ser | Glu | Asp | Gly | Ser 400 |
| Arg | Ile | Arg | Tyr | Gly 405 | Gly | Arg | Asp | Tyr | Ser 410 | Leu | Asp | Glu | Phe | Glu 415 | Ala |
| Asn | Lys | Ile | Leu 420 | His | Gln | His | Leu | Gly 425 | Ala | Pro | Glu | Glu | Arg 430 | Leu | Ala |
| Leu | His | Ile 435 | Leu | Arg | Thr | Gln | Gly 440 | Leu | Val | Pro | Glu | His 445 | Val | Glu | Thr |
| Arg | Thr 450 | Leu | His | Ser | Thr | Phe 455 | Gln | Pro | Asn | Ile | Ser 460 | Gln | Gly | Lys | Leu |
| Gln 465 | Met | Trp | Val | Asp | Val 470 | Phe | Pro | Lys | Ser | Leu 475 | Gly | Pro | Pro | Gly | Pro 480 |
| Pro | Phe | Asn | Ile | Thr 485 | Pro | Arg | Lys | Ala | Lys 490 | Lys | Tyr | Tyr | Leu | Arg 495 | Val |
| Ile | Ile | Trp | Asn 500 | Thr | Lys | Asp | Val | Ile 505 | Leu | Asp | Glu | Lys | Ser 510 | Ile | Thr |
| Gly | Glu | Glu 515 | Met | Ser | Asp | Ile | Tyr 520 | Val | Lys | Gly | Trp | Ile 525 | Pro | Gly | Asn |
| Glu | Glu 530 | Asn | Lys | Gln | Lys | Thr 535 | Asp | Val | His | Tyr | Arg 540 | Ser | Leu | Asp | Gly |
| Glu 545 | Gly | Asn | Phe | Asn | Trp 550 | Arg | Phe | Val | Phe | Pro 555 | Phe | Asp | Tyr | Leu | Pro 560 |
| Ala | Glu | Gln | Leu | Cys 565 | Ile | Val | Ala | Lys | Lys 570 | Glu | His | Phe | Trp | Ser 575 | Ile |
| Asp | Gln | Thr | Glu 580 | Phe | Arg | Ile | Pro | Pro 585 | Arg | Leu | Ile | Ile | Gln 590 | Ile | Trp |
| Asp | Asn | Asp 595 | Lys | Phe | Ser | Leu | Asp 600 | Asp | Tyr | Leu | Gly | Phe 605 | Leu | Glu | Leu |
| Asp | Leu 610 | Arg | His | Thr | Ile | Ile 615 | Pro | Ala | Lys | Ser | Pro 620 | Glu | Lys | Cys | Arg |
| Leu 625 | Asp | Met | Ile | Pro | Asp 630 | Leu | Lys | Ala | Met | Asn 635 | Pro | Leu | Lys | Ala | Lys 640 |
| Thr | Ala | Ser | Leu | Phe 645 | Glu | Gln | Lys | Ser | Met 650 | Lys | Gly | Trp | Trp | Pro 655 | Cys |
| Tyr | Ala | Glu | Lys 660 | Asp | Gly | Ala | Arg | Val 665 | Met | Ala | Gly | Lys | Val 670 | Glu | Met |
| Thr | Leu | Glu 675 | Ile | Leu | Asn | Glu | Lys 680 | Glu | Ala | Asp | Glu | Arg 685 | Pro | Ala | Gly |

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Lys | Gly | Arg | Asp | Glu | Pro | Asn | Met | Asn | Pro | Lys | Leu | Asp | Leu | Pro | Asn |
| | 690 | | | | | 695 | | | | | 700 | | | | |
| Arg | Pro | Glu | Thr | Ser | Phe | Leu | Trp | Phe | Thr | Asn | Pro | Cys | Lys | Thr | Met |
| 705 | | | | | 710 | | | | | 715 | | | | | 720 |
| Lys | Phe | Ile | Val | Trp | Arg | Arg | Phe | Lys | Trp | Val | Ile | Ile | Gly | Leu | Leu |
| | | | | 725 | | | | | 730 | | | | | 735 | |
| Phe | Leu | Leu | Ile | Leu | Leu | Leu | Phe | Val | Ala | Val | Leu | Leu | Tyr | Ser | Leu |
| | | | 740 | | | | | 745 | | | | | 750 | | |
| Pro | Asn | Tyr | Leu | Ser | Met | Lys | Ile | Val | Lys | Pro | Asn | Val | | | |
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 <212> PRT
 <213> homo sapiens

<400> 629

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Thr | Gln | Val | Val | Ile | Gln | Arg | Lys | Leu | Val | Ile | Val | Pro | Tyr | Leu |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Asn | Asp | Gln | Pro | Gly | Trp | Asp | Ser | Lys | Phe | Arg | Leu | Val | Asn | Thr | Pro |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Glu | Met | Leu | Phe | Phe | Arg | Asn | Asp | Thr | Glu | Leu | Phe | Gly | Trp | Lys | Val |
| | | 35 | | | | | 40 | | | | | 45 | | | |
| Val | Lys | Arg | Glu | Asn | Lys | Ser | Pro | Val | Lys | Ile | Pro | Phe | Thr | Ile | Gln |
| | 50 | | | | | 55 | | | | | 60 | | | | |
| Arg | Ser | Val | Met | Asp | Ile | Cys | Phe | Leu | Phe | Val | Phe | Phe | Ile | Ala | Arg |
| 65 | | | | | 70 | | | | | 75 | | | | | 80 |
| Asn | Pro | Ala | Phe | Asp | Val | Asp | Val | Thr | His | Phe | Leu | Ser | Cys | Asp | Ala |
| | | | | 85 | | | | | 90 | | | | | 95 | |
| Phe | Leu | Val | Gln | Asp | Asn | Val | Leu | Gly | Val | Pro | Asp | Asp | His | Thr | Gln |
| | | | 100 | | | | | 105 | | | | | 110 | | |
| Val | Val | Phe | Leu | Gly | Phe | Pro | Gly | Cys | Asp | Val | Glu | Arg | Arg | Ala | Trp |
| | | 115 | | | | | 120 | | | | | 125 | | | |
| Trp | Pro | Gln | Thr | Leu | Gly | Glu | Asn | Ile | His | Pro | His | Leu | Lys | Phe | Ser |
| | 130 | | | | | 135 | | | | | 140 | | | | |
| Leu | Gly | Asn | Val | Gly | Leu | Glu | Gly | Ala | Val | Gln | Ser | Pro | Cys | Phe | His |
| 145 | | | | | 150 | | | | | 155 | | | | | 160 |
| Val | Leu | Arg | Asp | Gln | Pro | Leu | Ser | Pro | Glu | Asp | Val | Lys | Ser | Lys | Pro |
| | | | | 165 | | | | | 170 | | | | | 175 | |
| Leu | Phe | Arg | Gly | Pro | Glu | Val | Leu | Val | Gln | Asp | Phe | Val | Gly | Phe | Lys |
| | | | 180 | | | | | 185 | | | | | 190 | | |
| Phe | Ile | Gln | Ala | Val | Val | Ser | Ser | Ser | Ile | Ser | Asp | Ser | Thr | Pro | Ile |
| | | 195 | | | | | 200 | | | | | 205 | | | |
| Phe | Gly | Lys | Asp | Gly | Leu | Trp | Glu | Ala | Phe | Glu | Ser | Gly | Asp | Ile | Leu |

| | | | | | | | | | | | | | | | | |
|------------|-----|------------|------------|------------|------------|-----|------------|------------|------------|------------|-----|------------|------------|------------|------------|--|
| | 210 | | | | | 215 | | | | | 220 | | | | | |
| Lys 225 | Gln | Leu | Cys | Trp | Ser 230 | Gln | Leu | Ile | Ser | Pro 235 | Gly | Ile | Asp | Ser | Arg 240 | |
| Asn | Thr | Val | Leu | Leu 245 | Trp | Tyr | Ala | Ala | Val 250 | Gly | Pro | Lys | Ala | Gly 255 | Lys | |
| Glu | Ser | Val | Phe 260 | Gln | Ile | Asn | Asn | Cys 265 | Phe | Ser | Tyr | Phe | Phe 270 | Ile | Pro | |
| Gly | Lys | Gly 275 | Val | Ile | Ile | Ile | Asp 280 | Arg | Asn | Phe | Gln | Val 285 | Phe | Phe | Leu | |

Arg

<210> 630
 <211> 824
 <212> PRT
 <213> homo sapiens

<400> 630

| | | | | | | | | | | | | | | | |
|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Arg 1 | Val | Ser | Val | Leu 5 | Ala | Ala | Ala | Ser | Ser 10 | Ala | Leu | Pro | Val | Ala 15 | Pro |
| Arg | Glu | Ala | Gly 20 | Val | Thr | Asn | Trp | Pro 25 | Ala | Gly | Cys | Val | Pro 30 | Glu | Val |
| Arg | Ser | Thr 35 | Gly | Glu | Lys | Glu | Val 40 | Ala | Lys | Thr | Leu | His 45 | Arg | Arg | Ser |
| Arg | Pro 50 | Glu | Trp | Cys | Gly | Ala 55 | Arg | Asp | Pro | Pro | Ala 60 | Met | Leu | Leu | Phe |
| Val 65 | Leu | Thr | Cys | Leu | Leu 70 | Ala | Val | Phe | Pro | Ala 75 | Ile | Ser | Thr | Lys | Ser 80 |
| Pro | Ile | Phe | Gly | Pro 85 | Glu | Glu | Val | Asn | Ser 90 | Val | Glu | Gly | Asn | Ser 95 | Val |
| Ser | Ile | Thr | Cys 100 | Tyr | Tyr | Pro | Pro | Thr 105 | Ser | Val | Asn | Arg | His 110 | Thr | Arg |
| Lys | Tyr | Trp 115 | Cys | Arg | Gln | Gly | Ala 120 | Arg | Gly | Gly | Cys | Ile 125 | Thr | Leu | Ile |
| Ser | Ser 130 | Glu | Gly | Tyr | Val | Ser 135 | Ser | Lys | Tyr | Ala | Gly 140 | Arg | Ala | Asn | Leu |
| Thr 145 | Asn | Phe | Pro | Glu | Asn 150 | Gly | Thr | Phe | Val | Val 155 | Asn | Ile | Ala | Gln | Leu 160 |
| Ser | Gln | Asp | Asp | Ser 165 | Gly | Arg | Tyr | Lys | Cys 170 | Gly | Leu | Gly | Ile | Asn 175 | Ser |
| Arg | Gly | Leu | Ser 180 | Phe | Asp | Val | Ser | Leu 185 | Glu | Val | Ser | Gln | Gly 190 | Pro | Gly |
| Leu | Leu | Asn 195 | Asp | Thr | Lys | Val | Tyr 200 | Thr | Val | Asp | Leu | Gly 205 | Arg | Thr | Val |
| Thr | Ile | Asn | Cys | Pro | Phe | Lys | Thr | Glu | Asn | Ala | Gln | Lys | Arg | Lys | Ser |

| 210 | | | | | 215 | | | | | 220 | | | | | | |
|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|--|
| Leu 225 | Tyr | Lys | Gln | Ile | Gly 230 | Leu | Tyr | Pro | Val | Leu 235 | Val | Ile | Asp | Ser | Ser 240 | |
| Gly | Tyr | Val | Asn | Pro 245 | Asn | Tyr | Thr | Gly | Arg 250 | Ile | Arg | Leu | Asp | Ile 255 | Gln | |
| Gly | Thr | Gly | Gln 260 | Arg | Leu | Phe | Ser | Val 265 | Val | Ile | Asn | Gln | Leu 270 | Arg | Leu | |
| Ser | Asp | Ala 275 | Gly | Gln | Tyr | Leu | Cys 280 | Gln | Ala | Gly | Asp | Asp 285 | Ser | Asn | Ser | |
| Asn | Lys 290 | Lys | Asn | Ala | Asp | Leu 295 | Gln | Val | Leu | Lys | Pro 300 | Glu | Pro | Glu | Leu | |
| Val 305 | Tyr | Glu | Asp | Leu | Arg 310 | Gly | Ser | Val | Thr | Phe 315 | His | Cys | Ala | Leu | Gly 320 | |
| Pro | Glu | Val | Ala | Asn 325 | Val | Ala | Lys | Phe | Leu 330 | Cys | Arg | Gln | Ser | Ser 335 | Gly | |
| Glu | Asn | Cys | Asp 340 | Val | Val | Val | Asn | Thr 345 | Leu | Gly | Lys | Arg | Ala 350 | Pro | Ala | |
| Phe | Glu | Gly 355 | Arg | Ile | Leu | Leu | Asn 360 | Pro | Gln | Asp | Lys | Asp 365 | Gly | Ser | Phe | |
| Ser | Val 370 | Val | Ile | Thr | Gly | Leu 375 | Arg | Lys | Glu | Asp | Ala 380 | Gly | Arg | Tyr | Leu | |
| Cys 385 | Gly | Ala | His | Ser | Asp 390 | Gly | Gln | Leu | Gln | Glu 395 | Gly | Ser | Pro | Ile | Gln 400 | |
| Ala | Trp | Gln | Leu | Phe 405 | Val | Asn | Glu | Glu | Ser 410 | Thr | Ile | Pro | Arg | Ser 415 | Pro | |
| Thr | Val | Val | Lys 420 | Gly | Val | Ala | Gly | Gly 425 | Ser | Val | Ala | Val | Leu 430 | Cys | Pro | |
| Tyr | Asn | Arg 435 | Lys | Glu | Ser | Lys | Ser 440 | Ile | Lys | Tyr | Trp | Cys 445 | Leu | Trp | Glu | |
| Gly | Ala 450 | Gln | Asn | Gly | Arg | Cys 455 | Pro | Leu | Leu | Val | Asp 460 | Ser | Glu | Gly | Trp | |
| Val 465 | Lys | Ala | Gln | Tyr | Glu 470 | Gly | Arg | Leu | Ser | Leu 475 | Leu | Glu | Glu | Pro | Gly 480 | |
| Asn | Gly | Thr | Phe | Thr 485 | Val | Ile | Leu | Asn | Gln 490 | Leu | Thr | Ser | Arg | Asp 495 | Ala | |
| Gly | Phe | Tyr | Trp 500 | Cys | Leu | Thr | Asn | Gly 505 | Asp | Thr | Leu | Trp | Arg 510 | Thr | Thr | |
| Val | Glu | Ile 515 | Lys | Ile | Ile | Glu | Gly 520 | Glu | Pro | Asn | Leu | Lys 525 | Val | Pro | Gly | |
| Asn | Val 530 | Thr | Ala | Val | Leu | Gly 535 | Glu | Thr | Leu | Lys | Val 540 | Pro | Cys | His | Phe | |
| Pro | Cys | Lys | Phe | Ser | Ser | Tyr | Glu | Lys | Tyr | Trp | Cys | Lys | Trp | Asn | Asn | |

| | | | | | | | | | | | | | | | |
|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 545 | | | | | 550 | | | | | 555 | | | | | 560 |
| Thr | Gly | Cys | Gln | Ala 565 | Leu | Pro | Ser | Gln | Asp 570 | Glu | Gly | Pro | Ser | Lys 575 | Ala |
| Phe | Val | Asn | Cys 580 | Asp | Glu | Asn | Ser | Arg 585 | Leu | Val | Ser | Leu | Thr 590 | Leu | Asn |
| Leu | Val | Thr 595 | Arg | Ala | Asp | Glu | Gly 600 | Trp | Tyr | Trp | Cys | Gly 605 | Val | Lys | Gln |
| Gly | His 610 | Phe | Tyr | Gly | Glu | Thr 615 | Ala | Ala | Val | Tyr | Val 620 | Ala | Val | Glu | Glu |
| Arg 625 | Lys | Ala | Ala | Gly | Ser 630 | Arg | Asp | Val | Ser | Leu 635 | Ala | Lys | Ala | Asp | Ala 640 |
| Ala | Pro | Asp | Glu | Lys 645 | Val | Leu | Asp | Ser | Gly 650 | Phe | Arg | Glu | Ile | Glu 655 | Asn |
| Lys | Ala | Ile | Gln 660 | Asp | Pro | Arg | Leu | Phe 665 | Ala | Glu | Glu | Lys | Ala 670 | Val | Ala |
| Asp | Thr | Arg 675 | Asp | Gln | Ala | Asp | Gly 680 | Ser | Arg | Ala | Ser | Val 685 | Asp | Ser | Gly |
| Ser | Ser 690 | Glu | Glu | Gln | Gly | Gly 695 | Ser | Ser | Arg | Ala | Leu 700 | Val | Ser | Thr | Leu |
| Val 705 | Pro | Leu | Gly | Leu | Val 710 | Leu | Ala | Val | Gly | Ala 715 | Val | Ala | Val | Gly | Val 720 |
| Ala | Arg | Ala | Arg | His 725 | Arg | Lys | Asn | Val | Asp 730 | Arg | Val | Ser | Ile | Arg 735 | Ser |
| Tyr | Arg | Thr | Asp 740 | Ile | Ser | Met | Ser | Asp 745 | Phe | Glu | Asn | Ser | Arg 750 | Glu | Phe |
| Gly | Ala | Asn 755 | Asp | Asn | Met | Gly | Ala 760 | Ser | Ser | Ile | Thr | Gln 765 | Glu | Thr | Ser |
| Leu | Gly 770 | Gly | Lys | Glu | Glu | Phe 775 | Val | Ala | Thr | Thr | Glu 780 | Ser | Thr | Thr | Glu |
| Thr 785 | Lys | Glu | Pro | Lys | Lys 790 | Ala | Lys | Arg | Ser | Ser 795 | Lys | Glu | Glu | Ala | Glu 800 |
| Met | Ala | Tyr | Lys | Asp 805 | Phe | Leu | Leu | Gln | Ser 810 | Ser | Thr | Val | Ala | Ala 815 | Glu |
| Ala | Gln | Asp | Gly 820 | Pro | Gln | Glu | Ala | | | | | | | | |

<210> 631
 <211> 267
 <212> PRT
 <213> homo sapiens
 <400> 631

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|-------|-----|-----|-----|-------|-----|-----|-----|-----|--------|-----|-----|-----|-----|--------|-----|
| Ala 1 | Asp | Ile | Ala | Gly 5 | Pro | Arg | Cys | Leu | Pro 10 | Leu | Phe | Asn | Cys | His 15 | Ile |
|-------|-----|-----|-----|-------|-----|-----|-----|-----|--------|-----|-----|-----|-----|--------|-----|

| | | | | | | | | | | | | | | | |
|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Asp | Gly | Cys | Ser 20 | Leu | Ser | Ile | Glu | Val 25 | Ala | Leu | Leu | His | Ser 30 | Thr | Pro |
| Val | Pro | Ala 35 | Leu | Ile | Ser | Pro | Gly 40 | His | Gln | Val | Gln | Gly 45 | Gln | Gly | Asp |
| Lys | Pro 50 | Ala | Val | Leu | Val | Thr 55 | Val | His | Glu | Gly | Leu 60 | Ala | Gly | Ala | Phe |
| Val 65 | Leu | Ala | Gly | Gln | Gly 70 | Leu | Ala | Ala | Arg | Val 75 | Ile | Pro | Leu | Ala | Pro 80 |
| Val | Phe | Leu | Val | Arg 85 | Gly | Glu | Phe | Ala | Trp 90 | Lys | Val | Thr | Gly | Asp 95 | Leu |
| Glu | Ser | Leu | Ser 100 | Gln | His | Ser | Arg | Asp 105 | Ile | Pro | Trp | Tyr | Leu 110 | Glu | Val |
| Trp | Phe | Ser 115 | Phe | Asp | Asn | Leu | Asp 120 | Leu | His | Gly | Gly | Pro 125 | Pro | Glu | Ser |
| Ile | Ala 130 | Val | Gly | Gln | Thr | Pro 135 | Val | Glu | Ala | Gly | Val 140 | Pro | Ala | Gly | Glu |
| Leu 145 | Val | Glu | Asp | Asp | Ser 150 | Glu | Gly | Ala | Val | Ala 155 | Trp | Leu | Leu | Gln | Gln 160 |
| Gly | Glu | Ala | Ala | Leu 165 | Val | Leu | Gly | Leu | Asn 170 | Pro | Pro | Leu | Ala | Val 175 | His |
| Gln | Gln | Gly | Ala 180 | Ala | Ala | Ile | Leu | Gly 185 | Pro | Phe | Pro | Glu | Thr 190 | Pro | Val |
| Leu | Asp | Ala 195 | Phe | Ala | Phe | Leu | Thr 200 | Val | Val | Gly | Ala | Glu 205 | His | Gly | His |
| Arg | Ala 210 | Ser | Cys | His | Pro | Leu 215 | His | His | Ser | Gly | Ala 220 | Ala | Gly | Asn | Arg |
| Gly 225 | Leu | Leu | Ile | Asp | Glu 230 | Glu | Leu | Pro | Gly | Leu 235 | Asp | Arg | Arg | Ala | Phe 240 |
| Leu | Gln | Leu | Thr | Ile 245 | Arg | Met | Gly | Ser | Thr 250 | Gln | Val | Ala | Pro | Cys 255 | Ile |
| Leu | Leu | Pro | Gln 260 | Ala | Cys | Asp | His | His 265 | Thr | Glu | | | | | |

<210> 632

<211> 140

<212> PRT

<213> homo sapiens

<400> 632

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|----------|-----|-----------|-----------|----------|-----|-----|-----------|-----------|-----------|-----|-----|-----------|-----------|-----------|-----|
| Gly 1 | Glu | Thr | Arg | Val 5 | His | Ser | Gln | Gln | Gly 10 | Gly | Gly | Ile | Lys | Ala 15 | Pro |
| Ser | Trp | Asp | Trp 20 | Phe | Phe | Arg | Glu | Pro 25 | Gly | Pro | Leu | Val | Lys 30 | Gly | Leu |
| Leu | Gly | His 35 | Val | Lys | Gln | Tyr | Leu 40 | Glu | Gln | Pro | Arg | Pro 45 | Trp | Gly | Tyr |

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gln | Val | Glu | Arg | Arg | Glu | Gly | Arg | Arg | Leu | Pro | Cys | Thr | His | Leu | Pro |
| | 50 | | | | | 55 | | | | | 60 | | | | |
| Trp | Trp | Ala | Gly | Phe | Ser | Leu | Leu | Gly | Ser | Thr | Leu | Pro | Pro | Ser | Val |
| 65 | | | | | 70 | | | | | 75 | | | | | 80 |
| His | Asp | Thr | Asp | Pro | Arg | Ala | Ser | Pro | Cys | Pro | Arg | Pro | Ser | Tyr | Arg |
| | | | | 85 | | | | | 90 | | | | | 95 | |
| Leu | Leu | Phe | Gln | Asp | Ile | Thr | Asp | Asn | Pro | Glu | Arg | Met | Glu | Lys | Gly |
| | | | 100 | | | | | 105 | | | | | 110 | | |
| Gly | Ala | Trp | Val | Pro | Ala | Val | Ser | Gly | Gln | Lys | Glu | Val | Ala | Cys | Gly |
| | | 115 | | | | | 120 | | | | | 125 | | | |
| Asn | Leu | Arg | Ser | Pro | His | Pro | Arg | Phe | Pro | Lys | Arg | | | | |
| | 130 | | | | | 135 | | | | | 140 | | | | |

<210> 633
 <211> 127
 <212> PRT
 <213> homo sapiens

<400> 633

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Val | Phe | Pro | Cys | His | Leu | Val | Gly | Ala | Gly | Pro | Thr | Pro | Ala | Thr | Thr |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Ser | Gly | Thr | Ala | Lys | Gly | Ser | Thr | Arg | Cys | Asp | Tyr | Pro | Gly | Pro | Cys |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Trp | Gln | Leu | Arg | Ile | Pro | Gly | Thr | Cys | Ser | Asp | Pro | Val | Ser | Gly | Ser |
| | | 35 | | | | | 40 | | | | | 45 | | | |
| Ser | Glu | Ser | Gln | Glu | Pro | Arg | Met | Arg | Ala | Leu | Cys | Ser | Pro | Ser | Ser |
| | 50 | | | | | 55 | | | | | 60 | | | | |
| Lys | Thr | Gln | Gly | Ser | Pro | Pro | Arg | Lys | Gly | Ala | His | Val | Pro | Gln | Arg |
| 65 | | | | | 70 | | | | | 75 | | | | | 80 |
| Gly | Trp | Leu | Pro | Gly | Cys | Tyr | Leu | Phe | Tyr | Pro | Thr | Ser | Ala | Ala | Glu |
| | | | | 85 | | | | | 90 | | | | | 95 | |
| Ser | Gln | Gly | Glu | Thr | Ala | Ser | His | Pro | Lys | Pro | Leu | Gly | Phe | Ser | Arg |
| | | | 100 | | | | | 105 | | | | | 110 | | |
| Glu | Lys | Asn | Leu | Ser | Gln | Lys | His | Asp | Leu | Phe | Ser | Gly | Cys | Lys | |
| | | 115 | | | | | 120 | | | | | 125 | | | |

<210> 634
 <211> 140
 <212> PRT
 <213> homo sapiens

<400> 634

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|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| His | His | Gln | Lys | His | Met | Gln | Gly | Lys | Gly | Ser | Tyr | Trp | Ala | Ser | Gly |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Leu | Leu | Ser | Pro | Trp | Leu | Gly | Arg | Lys | Gly | Arg | Glu | Asp | Gly | Trp | Gly |
| | | | 20 | | | | | 25 | | | | | 30 | | |

| | | | | | | | | | | | | | | | |
|-----------|------------|------------|------------|-----------|-----------|------------|------------|------------|-----------|-----------|------------|------------|------------|-----------|-----------|
| Ser | Leu | Phe 35 | Gly | Ile | Asp | Asp | Val 40 | His | Glu | Phe | Gly | Leu 45 | Glu | Gly | Ser |
| Thr | Thr 50 | His | Lys | Glu | Ala | Ile 55 | His | Ile | Arg | Leu | Ala 60 | Gly | Gln | Leu | Leu |
| Ala 65 | Gly | Cys | Pro | Ser | His 70 | Arg | Ala | Ser | Ile | Asn 75 | Asp | Thr | Gly | Ala | Leu 80 |
| Ser | His | Arg | Ile | Arg 85 | Asp | Val | Gly | Leu | Gln 90 | Pro | Ser | Ser | Glu | Leu 95 | Leu |
| Val | Tyr | Phe | Leu 100 | Gly | Leu | Leu | Gly | Cys 105 | Cys | Ser | Leu | Ala | Ser 110 | Thr | Asn |
| Gly | Pro | His 115 | Arg | Leu | Ile | Gly | Gln 120 | Asp | Asp | Leu | Ala | Pro 125 | Val | Leu | His |
| Val | Ile 130 | Cys | Asp | Asp | Leu | Leu 135 | Val | Trp | Trp | Glu | Gly 140 | | | | |

<210> 635
 <211> 101
 <212> PRT
 <213> homo sapiens

<400> 635

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| Lys 1 | Val | Ile | Ala | Asp 5 | Asn | Val | Lys | Asp | Trp 10 | Ser | Lys | Val | Val | Leu 15 | Ala |
| Tyr | Glu | Pro | Val 20 | Trp | Ala | Ile | Gly | Thr 25 | Gly | Lys | Thr | Ala | Thr 30 | Pro | Gln |
| Gln | Ala | Gln 35 | Glu | Val | His | Glu | Lys 40 | Leu | Arg | Gly | Trp | Leu 45 | Lys | Ser | Asn |
| Val | Ser 50 | Asp | Ala | Val | Ala | Gln 55 | Ser | Thr | Arg | Ile | Ile 60 | Tyr | Gly | Gly | Ser |
| Val 65 | Thr | Gly | Ala | Thr | Cys 70 | Lys | Glu | Leu | Ala | Ser 75 | Gln | Pro | Asp | Val | Asp 80 |
| Gly | Phe | Leu | Val | Gly 85 | Gly | Ala | Ser | Leu | Lys 90 | Pro | Glu | Phe | Val | Asp 95 | Ile |
| Ile | Asn | Ala | Lys 100 | Gln | | | | | | | | | | | |

<210> 636
 <211> 329
 <212> PRT
 <213> homo sapiens

<400> 636

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| Asp 1 | Ser | Ile | Phe | Pro 5 | Leu | Trp | Ala | Val | Leu 10 | Ala | Leu | Ser | Pro | Pro 15 | Gly |
| Ile | Arg | Val | Arg 20 | Met | Lys | Lys | Ser | Ser 25 | Val | Ser | Gly | Met | Thr 30 | Ala | Ala |
| Gly | Trp | Val | Val | Trp | Gly | Glu | Ala | Glu | Gly | Lys | Ala | Ala | Leu | Arg | Leu |

| 35 | | | | | 40 | | | | | 45 | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gly | Val | Glu | Phe | Leu | Glu | Val | Trp | Gly | Gly | Gly | Arg | Val | Phe | Asn | Leu |
| | 50 | | | | | 55 | | | | | 60 | | | | |
| Glu | Lys | Ser | Gln | Pro | Ala | Arg | Ala | Glu | Arg | Glu | Cys | Glu | Arg | Gly | Ser |
| 65 | | | | | 70 | | | | | 75 | | | | | 80 |
| Ser | Glu | Gly | Ala | Arg | Asn | Gly | Val | Gly | Gly | Ser | Gly | Gly | Arg | Ser | Val |
| | | | | 85 | | | | | 90 | | | | | 95 | |
| Ala | Val | Ala | Leu | Val | His | Gln | His | Gly | Val | Arg | Leu | Leu | Gly | Asp | Leu |
| | | | 100 | | | | | 105 | | | | | 110 | | |
| Gln | Gln | Arg | Val | His | Val | Gly | Ala | Ala | Pro | Ala | Pro | Gln | Val | Ala | Gly |
| | | 115 | | | | | 120 | | | | | 125 | | | |
| Leu | Pro | Pro | Leu | Arg | Ala | Ala | Leu | Val | Val | Val | Gly | Ala | His | Leu | His |
| | 130 | | | | | 135 | | | | | 140 | | | | |
| His | Leu | Gly | Gly | Leu | Glu | His | Phe | His | Leu | Ala | Leu | Ala | Asp | Leu | Leu |
| 145 | | | | | 150 | | | | | 155 | | | | | 160 |
| Asp | Val | Glu | Gly | Glu | Gly | Trp | His | Leu | Val | Asp | Arg | Gly | Leu | Gly | Ala |
| | | | | 165 | | | | | 170 | | | | | 175 | |
| Arg | Val | His | His | Val | Val | Gly | Arg | Glu | Gly | Phe | Ala | Gln | Leu | Val | Pro |
| | | | 180 | | | | | 185 | | | | | 190 | | |
| Arg | Arg | Leu | Gln | Phe | Leu | Ala | Pro | Leu | Gly | Gly | His | Gln | Ala | Arg | Ala |
| | | 195 | | | | | 200 | | | | | 205 | | | |
| Gln | Leu | Val | His | Ala | Leu | Leu | Gln | Gly | Val | Pro | Arg | Leu | Leu | Gln | Val |
| | 210 | | | | | 215 | | | | | 220 | | | | |
| Phe | Leu | Gly | Leu | Glu | Ala | Arg | Leu | Leu | Gln | Val | Leu | Ala | Gly | Thr | His |
| 225 | | | | | 230 | | | | | 235 | | | | | 240 |
| Leu | Gly | Leu | Leu | His | Leu | Leu | Leu | Gly | Glu | Gly | Leu | Leu | Glu | Val | Val |
| | | | | 245 | | | | | 250 | | | | | 255 | |
| His | Ala | Pro | Gln | Ala | Leu | Arg | Leu | Ile | Arg | Ser | Ala | Arg | Asp | Ser | Ser |
| | | | 260 | | | | | 265 | | | | | 270 | | |
| Ile | Thr | Ser | Ser | Thr | Ser | Thr | Ala | Ser | Ser | Asp | Glu | Ser | Ser | Ser | Ala |
| | | 275 | | | | | 280 | | | | | 285 | | | |
| Ala | Ala | Ser | Ser | Ser | Gly | Arg | Ser | Pro | Ser | Pro | Ser | Ser | Ser | Pro | Ser |
| | 290 | | | | | 295 | | | | | 300 | | | | |
| Phe | Ser | Gly | Ser | Ala | Ser | Asp | Ser | Phe | Ser | Asp | Leu | Leu | Met | Leu | Ser |
| 305 | | | | | 310 | | | | | 315 | | | | | 320 |
| Leu | Ala | Gly | Ser | Phe | Thr | Ser | Ser | Trp | | | | | | | |
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<210> 637

<211> 263

<212> PRT

<213> homo sapiens

<400> 637

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|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Gly 1 | Arg | Leu | Pro | Gly 5 | Tyr | Pro | Asp | Arg | Arg 10 | Gly | Pro | Gly | Ala | Ser 15 | Ser |
| Ala | Gly | Ala | Gln 20 | Ala | Ala | Glu | Glu | Pro 25 | Ser | Gly | Ala | Gly | Ser 30 | Glu | Glu |
| Leu | Ile | Lys 35 | Ser | Asp | Gln | Val | Asn 40 | Gly | Val | Leu | Val | Leu 45 | Ser | Leu | Leu |
| Asp | Lys 50 | Ile | Ile | Gly | Ala | Val 55 | Asp | Gln | Ile | Gln | Leu 60 | Thr | Gln | Ala | Gln |
| Leu 65 | Glu | Glu | Arg | Gln | Ala 70 | Glu | Met | Glu | Gly | Ala 75 | Val | Gln | Ser | Ile | Gln 80 |
| Gly | Glu | Leu | Ser | Lys 85 | Leu | Gly | Lys | Ala | His 90 | Ala | Thr | Thr | Ser | Asn 95 | Thr |
| Val | Ser | Lys | Leu 100 | Leu | Glu | Lys | Val | Arg 105 | Lys | Val | Ser | Val | Asn 110 | Val | Lys |
| Thr | Val | Arg 115 | Gly | Ser | Leu | Glu | Arg 120 | Gln | Ala | Gly | Gln | Ile 125 | Lys | Lys | Leu |
| Glu | Val 130 | Asn | Glu | Ala | Glu | Leu 135 | Leu | Arg | Arg | Arg | Asn 140 | Phe | Lys | Val | Met |
| Ile 145 | Tyr | Gln | Asp | Glu | Val 150 | Lys | Leu | Pro | Ala | Lys 155 | Leu | Ser | Ile | Ser | Lys 160 |
| Ser | Leu | Lys | Glu | Ser 165 | Glu | Ala | Leu | Pro | Glu 170 | Lys | Glu | Gly | Glu | Glu 175 | Leu |
| Gly | Glu | Gly | Glu 180 | Arg | Pro | Glu | Glu | Asp 185 | Ala | Ala | Ala | Leu | Glu 190 | Leu | Ser |
| Ser | Asp | Glu 195 | Ala | Val | Glu | Val | Glu 200 | Glu | Val | Ile | Glu | Glu 205 | Ser | Arg | Ala |
| Glu | Arg 210 | Ile | Lys | Arg | Arg | Ala 215 | Cys | Gly | Ala | Trp | Thr 220 | Thr | Ser | Arg | Arg |
| Pro 225 | Ser | Pro | Arg | Arg | Arg 230 | Trp | Arg | Arg | Pro | Arg 235 | Cys | Val | Pro | Ala | Arg 240 |
| Thr | Trp | Arg | Arg | Arg 245 | Ala | Ser | Arg | Pro | Arg 250 | Lys | Thr | Trp | Arg | Arg 255 | Arg |
| Gly | Thr | Pro | Trp 260 | Arg | Ser | Ala | | | | | | | | | |

<210> 638

<211> 205

<212> PRT

<213> homo sapiens

<400> 638

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|----------|-----|-----|-----------|----------|-----|-----|-----|-----------|-----------|-----|-----|-----|-----------|-----------|-----|
| Ser 1 | Gly | Asp | Leu | Arg 5 | Leu | Leu | Val | Asp | Thr 10 | Ser | Lys | Val | Gln | Glu 15 | Ala |
| Trp | Val | Pro | Ser 20 | Gln | Asp | Thr | His | His 25 | Thr | Gln | Glu | Leu | Leu 30 | Ala | Val |

| | | | | | | | | | | | | | | | |
|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Gln | Gly | Ser 35 | Leu | Val | Ser | Gly | Tyr 40 | Arg | Pro | Gly | Gly | Gly 45 | Phe | Gly | Ala |
| Ala | Pro 50 | Val | His | Glu | Asp | Pro 55 | His | Leu | Leu | Gly | Pro 60 | Ala | Ser | Arg | Gly |
| Ala 65 | Pro | Glu | Thr | Ala | Ala 70 | Phe | Phe | Phe | Phe | Phe 75 | Phe | Phe | Phe | Phe | Pro 80 |
| Glu | Gln | His | Leu | Arg 85 | Val | Gly | Leu | Leu | Leu 90 | Leu | Pro | Pro | Arg | Leu 95 | Ser |
| Pro | Arg | Pro | Gly 100 | Pro | Ala | Trp | Pro | Val 105 | Pro | Asn | Pro | Val | Gly 110 | Trp | Pro |
| Gly | His | Leu 115 | His | Gln | Gly | Gly | Gln 120 | Leu | Leu | Ala | Gly | Thr 125 | Asn | Lys | Pro |
| Phe | His 130 | Leu | Ala | Met | Val | Val 135 | Val | Phe | Ser | Met | Asp 140 | Arg | Gly | Pro | Glu |
| Thr 145 | Arg | Ala | Gly | Arg | Gly 150 | Arg | Glu | His | Thr | Ser 155 | Leu | Gly | Val | Gly | Thr 160 |
| Ser | Leu | Xxx | Thr | Pro 165 | Gln | Gln | Leu | Xxx | Gly 170 | Pro | Arg | Xxx | Xxx | Phe 175 | Pro |
| Xxx | Ala | Val | Gln 180 | Ala | Ser | Pro | Xxx | Pro 185 | Gly | Val | Cys | Ser | Leu 190 | Ala | Trp |
| Val | Glu | Leu 195 | Cys | His | Ile | Xxx | Asp 200 | Lys | Gln | Xxx | Gly | Gly 205 | | | |

<210> 639

<211> 171

<212> PRT

<213> homo sapiens

<400> 639

| | | | | | | | | | | | | | | | |
|-----------|-----------|-----------|------------|-----------|-----------|-----------|-----------|------------|-----------|-----------|-----------|-----------|------------|-----------|-----------|
| Pro 1 | Val | Thr | Pro | Arg 5 | Asp | Xxx | Pro | Gly | Ala 10 | Gly | Gly | Gly | Ser | Xxx 15 | Glu |
| Gly | Pro | Met | Gln 20 | His | Pro | Gly | Gln | Ser 25 | Arg | Pro | Xxx | Pro | Leu 30 | Ala | Xxx |
| Pro | Ala | Pro 35 | Xxx | Trp | Xxx | Leu | Met 40 | Ala | Pro | Cys | Gly | Ala 45 | Leu | Thr | Cys |
| Trp | Ala 50 | Arg | Leu | Xxx | Leu | Gly 55 | Leu | Ser | Ala | Pro | Xxx 60 | Leu | Leu | Ile | Xxx |
| Asp 65 | Val | Thr | Glu | Leu | Asp 70 | Pro | Ser | Gln | Ala | Ala 75 | His | Ser | Trp | Thr | Trp 80 |
| Ala | Ser | Leu | His | Cys 85 | Xxx | Gly | Lys | Xxx | Xxx 90 | Pro | Arg | Ala | Xxx | Lys 95 | Leu |
| Leu | Arg | Gly | Xxx 100 | Glu | Ala | Gly | Ala | His 105 | Pro | Gln | Ala | Ser | Val 110 | Phe | Ser |
| Ala | Pro | Pro | Cys | Pro | Arg | Phe | Arg | Ala | Ser | Val | His | Arg | Glu | His | His |

| | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|
| | | 115 | | | | | 120 | | | | | 125 | | | | |
| His | His | Gly | Gln | Val | Glu | Gly | Phe | Ile | Ser | Pro | Cys | Gln | Gln | Leu | Ser | |
| | 130 | | | | | 135 | | | | | 140 | | | | | |
| Ser | Leu | Val | Gln | Val | Ala | Trp | Pro | Ala | His | Trp | Ile | Gly | Asp | Gly | Pro | |
| 145 | | | | | 150 | | | | | 155 | | | | | 160 | |
| Gly | Trp | Ala | Arg | Ser | Gly | Ala | Gln | Ser | Gly | Arg | | | | | | |
| | | | | 165 | | | | | 170 | | | | | | | |

<210> 640
 <211> 161
 <212> PRT
 <213> homo sapiens

<400> 640

| | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|
| Ile | Ser | Arg | Asn | Glu | Gly | Val | Leu | Val | Arg | Gly | Pro | Lys | Ser | Pro | Arg | |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | | |
| Ser | Leu | Leu | Arg | Ser | His | Ser | Glu | Pro | Pro | Ala | Leu | Val | Leu | Trp | Arg | |
| | | | 20 | | | | | 25 | | | | | 30 | | | |
| Asp | His | Arg | Leu | Val | Pro | Gly | Thr | Asp | Tyr | Cys | Lys | Asp | Thr | Ala | Leu | |
| | | 35 | | | | | 40 | | | | | 45 | | | | |
| Val | Pro | Thr | Glu | Lys | Asn | Thr | Gly | Gln | Gln | Glu | His | Thr | Phe | Ser | Gln | |
| | 50 | | | | | 55 | | | | | 60 | | | | | |
| Tyr | Leu | Ala | Thr | Pro | His | Ser | Glu | Leu | Thr | Ile | Thr | His | Gly | Lys | Trp | |
| 65 | | | | | 70 | | | | | 75 | | | | | 80 | |
| Val | His | Ser | Ser | Leu | Trp | Ser | Asp | Pro | Ala | Gly | Leu | Gly | Arg | Gln | Glu | |
| | | | | 85 | | | | | 90 | | | | | 95 | | |
| Gln | His | Ser | Ser | Ser | Ser | Leu | Ser | Pro | Arg | Gln | Arg | Glu | Ser | Leu | Asn | |
| | | | 100 | | | | | 105 | | | | | 110 | | | |
| Cys | Lys | Arg | Ser | Gly | Ala | Tyr | Thr | Val | Arg | Glu | Lys | Glu | Lys | Gly | Gly | |
| | | 115 | | | | | 120 | | | | | 125 | | | | |
| Arg | Lys | Gly | Phe | Ser | Pro | Arg | Pro | Pro | Arg | Asp | Ala | His | Arg | Glu | Gly | |
| | 130 | | | | | 135 | | | | | 140 | | | | | |
| Gly | Lys | Glu | Arg | Glu | Lys | Ser | Val | Leu | Glu | Ser | Glu | Ala | Thr | Leu | Ser | |
| 145 | | | | | 150 | | | | | 155 | | | | | 160 | |

Lys

<210> 641
 <211> 127
 <212> PRT
 <213> homo sapiens

<400> 641

| | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|
| Cys | Ala | Tyr | Arg | Thr | Glu | Lys | Trp | Lys | Ser | His | Thr | Val | Pro | Cys | Ser | |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | | |
| Pro | Glu | Val | Lys | Leu | Val | Leu | Thr | Leu | Ala | Leu | Arg | Ala | Phe | Ser | Ser | |
| | | | 20 | | | | | 25 | | | | | 30 | | | |

| | | | | | | | | | | | | | | | |
|-----------|-----------|------------|------------|-----------|-----------|-----------|------------|------------|-----------|-----------|-----------|------------|------------|-----------|-----------|
| Met | Glu | Pro 35 | Leu | Gly | Leu | Gly | Arg 40 | Lys | Ala | Arg | Val | Ser 45 | Ala | His | Arg |
| His | Thr 50 | Ser | Tyr | Leu | Gln | Asp 55 | Ile | Asp | Cys | Leu | Cys 60 | Arg | Gly | Ser | Thr |
| Gly 65 | Gln | Pro | Thr | Ala | Asn 70 | Thr | Ala | Ala | Ser | Leu 75 | Val | Ser | Ala | Ser | Leu 80 |
| Leu | Pro | Val | His | Pro 85 | Gly | Asp | Tyr | Ser | Trp 90 | Ile | Asn | Leu | Pro | Lys 95 | Asn |
| Ser | Ala | Phe | Ile 100 | Met | Ser | Leu | Phe | Cys 105 | Ser | Lys | Thr | Gln | Asn 110 | Gly | Ser |
| Leu | Pro | Pro 115 | Arg | Gly | Arg | Pro | Ser 120 | His | His | Cys | Ile | Pro 125 | Asn | Arg | |

<210> 642
 <211> 136
 <212> PRT
 <213> homo sapiens

<400> 642

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|-----------|------------|------------|------------|-----------|-----------|------------|------------|------------|-----------|-----------|-----------|------------|------------|-----------|-----------|
| Trp 1 | Gly | Xxx | Gly | Arg 5 | Val | Arg | Val | Xxx | Gly 10 | Trp | Xxx | Arg | Lys | Pro 15 | Met |
| Lys | Xxx | Gly | Ile 20 | Pro | Pro | Glu | Xxx | His 25 | Gly | Pro | Ile | Thr | Ala 30 | Asp | Gly |
| His | Arg | Xxx 35 | Leu | Xxx | Xxx | Leu | Pro 40 | Pro | Xxx | Gly | Xxx | Arg 45 | Cys | Xxx | Xxx |
| Ala | Asp 50 | Pro | Lys | Gly | Xxx | Gly 55 | Leu | Xxx | Ala | Leu | Phe 60 | Xxx | Lys | Xxx | Pro |
| Pro 65 | Xxx | Glu | Xxx | Cys | Leu 70 | Leu | Ser | Xxx | Xxx | Pro 75 | Xxx | Xxx | Pro | Val | Thr 80 |
| His | Arg | Ala | Gly | Met 85 | Glu | Phe | Asn | Gly | Xxx 90 | Phe | Trp | Xxx | Xxx | Thr 95 | Leu |
| Val | His | Gly | Gln 100 | Thr | Ser | Leu | Leu | Xxx 105 | Gly | Tyr | Xxx | Thr | Arg 110 | Leu | Lys |
| Xxx | Lys | Ile 115 | Val | Cys | Cys | His | Ser 120 | Ser | Gly | Xxx | Trp | Ser 125 | Val | Cys | Gly |
| Leu | His 130 | Arg | Phe | His | Arg | Asn 135 | Gln | | | | | | | | |

<210> 643
 <211> 132
 <212> PRT
 <213> homo sapiens

<400> 643

| | | | | | | | | | | | | | | | |
|----------|-----|-----|-----|----------|-----|-----|-----|-----|-----------|-----|-----|-----|-----|-----------|-----|
| Gly 1 | Arg | Xxx | Ser | Arg 5 | Ala | Trp | Gly | Leu | Gly 10 | Cys | Pro | Ser | Leu | Leu 15 | Ser |
| Pro | Ile | Ser | Leu | Arg | Leu | Pro | Val | Pro | Pro | Pro | Arg | Pro | Pro | Asn | Leu |

| | | | | | | | | | | | | | | | |
|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Leu 1 | Thr | Asn | Met | Ser 5 | Asp | His | Leu | Phe | Gly 10 | Trp | Leu | Leu | Leu | Glu 15 | Met |
| Ala | Val | Val | Met 20 | Phe | Ser | Gly | Leu | Cys 25 | Gln | Pro | Thr | Asp | Pro 30 | Cys | Gln |
| Val | Leu | Glu 35 | Ile | Leu | Leu | Leu | Pro 40 | Arg | Cys | Tyr | Phe | Ser 45 | Ala | Gly | Ile |
| Lys | Leu 50 | Leu | Xxx | Val | Ala | Arg 55 | Pro | Arg | Thr | Ser | Lys 60 | Asp | Ser | Cys | Tyr |
| Ser 65 | Ala | Thr | Val | Tyr | Thr 70 | Ala | His | Leu | Ser | Tyr 75 | Ser | His | Val | Leu | Ser 80 |
| Ser | Leu | Val | Arg | Leu 85 | Phe | | | | | | | | | | |

<210> 646
 <211> 96
 <212> PRT
 <213> homo sapiens
 <400> 646

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|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Lys 1 | Ala | Pro | Asn | Pro 5 | Ser | Val | Leu | His | Thr 10 | Val | Arg | Met | Gln | Leu 15 | Ile |
| Ala | Asp | Arg | Cys 20 | Cys | Glu | Leu | Tyr | Ile 25 | Cys | Lys | Arg | Cys | Phe 30 | Thr | Thr |
| Ser | Ala | Gly 35 | Phe | Ile | Thr | Ala | Ser 40 | Trp | Ser | Arg | Val | Ala 45 | Ile | Leu | Pro |
| Ala | Ile 50 | Pro | Ala | Lys | Gln | Thr 55 | Pro | Glu | Asn | Tyr | Pro 60 | Leu | Arg | Ser | Gly |
| Val 65 | Leu | Arg | Lys | Phe | Leu 70 | Glu | Pro | Lys | Ile | Arg 75 | Arg | Asn | Pro | Gly | Leu 80 |
| Ser | Phe | Leu | Arg | Ser 85 | Lys | Met | Tyr | Tyr | Gln 90 | Leu | Arg | Pro | Gly | Glu 95 | His |

<210> 647
 <211> 92
 <212> PRT
 <213> homo sapiens
 <400> 647

| | | | | | | | | | | | | | | | |
|----------|-----------|-----------|-----------|----------|-----|-----------|-----------|-----------|-----------|-----|-----------|-----------|-----------|-----------|-----|
| Ser 1 | Ser | Ala | Cys | Arg 5 | Cys | Thr | Thr | Arg | Ser 10 | Thr | Gly | Gln | Gln | Ser 15 | Ala |
| Ala | Ser | Gly | Arg 20 | Cys | Gly | Gly | Pro | Arg 25 | Gly | Trp | Gly | Pro | Ser 30 | Thr | Gly |
| Ala | Thr | Pro 35 | Arg | Gln | Leu | Thr | Met 40 | Asn | Ile | Pro | Phe | Gln 45 | Ser | Ile | His |
| Phe | Ile 50 | Thr | Tyr | Glu | Phe | Leu 55 | Gln | Glu | Gln | Val | Asn 60 | Pro | His | Arg | Thr |

| | | | | | | | | | | | | | | | |
|-----------|-----|-----|-----|-----------|-----------|-----|-----|-----|-----------|-----------|-----|-----|-----|-----|-----------|
| Tyr 65 | Asn | Pro | Gln | Ser | His 70 | Ile | Ile | Ser | Gly | Gly 75 | Leu | Ala | Gly | Ala | Leu 80 |
| Ala | Ala | Ala | Ala | Arg 85 | Gly | Pro | Leu | Asp | Val 90 | Leu | Arg | | | | |

<210> 648
 <211> 280
 <212> PRT
 <213> homo sapiens

<400> 648

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|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Ala 1 | Val | Gly | Ser | Ala 5 | Ala | Leu | Phe | Lys | Asp 10 | Gly | Gly | Gly | Gly | Thr 15 | Ser |
| Ala | Ala | Glu | Ala 20 | Gly | Ala | Ala | Gly | Gln 25 | Arg | Leu | Arg | Ser | Val 30 | Asn | Cys |
| Leu | Ala | Tyr 35 | Asp | Glu | Ala | Ile | Met 40 | Ala | Gln | Gln | Asp | Arg 45 | Ile | Gln | Gln |
| Glu | Ile 50 | Ala | Val | Gln | Asn | Pro 55 | Leu | Val | Ser | Glu | Arg 60 | Leu | Glu | Leu | Ser |
| Val 65 | Leu | Tyr | Lys | Glu | Tyr 70 | Ala | Glu | Asp | Asp | Asn 75 | Ile | Tyr | Gln | Gln | Lys 80 |
| Ile | Lys | Asp | Leu | His 85 | Lys | Lys | Tyr | Ser | Tyr 90 | Ile | Arg | Lys | Thr | Arg 95 | Pro |
| Asp | Gly | Asn | Cys 100 | Phe | Tyr | Arg | Ala | Phe 105 | Gly | Phe | Ser | His | Leu 110 | Glu | Ala |
| Leu | Leu | Asp 115 | Asp | Ser | Lys | Glu | Leu 120 | Gln | Arg | Phe | Lys | Ala 125 | Val | Ser | Ala |
| Lys | Ser 130 | Lys | Glu | Asp | Leu | Val 135 | Ser | Gln | Gly | Phe | Thr 140 | Glu | Phe | Thr | Ile |
| Glu 145 | Asp | Phe | His | Asn | Thr 150 | Phe | Met | Asp | Leu | Ile 155 | Glu | Gln | Val | Glu | Lys 160 |
| Gln | Thr | Ser | Val | Ala 165 | Asp | Leu | Leu | Ala | Ser 170 | Phe | Asn | Asp | Gln | Ser 175 | Thr |
| Ser | Asp | Tyr | Leu 180 | Val | Val | Tyr | Leu | Arg 185 | Leu | Leu | Thr | Ser | Gly 190 | Tyr | Leu |
| Gln | Arg | Glu 195 | Ser | Lys | Phe | Phe | Glu 200 | His | Phe | Ile | Glu | Gly 205 | Gly | Arg | Thr |
| Val | Lys 210 | Glu | Phe | Cys | Gln | Gln 215 | Glu | Val | Glu | Pro | Met 220 | Cys | Lys | Glu | Ser |
| Asp 225 | His | Ile | His | Ile | Ile 230 | Ala | Leu | Ala | Gln | Ala 235 | Leu | Ser | Val | Ser | Ile 240 |
| Gln | Val | Glu | Tyr | Met 245 | Asp | Arg | Gly | Glu | Gly 250 | Gly | Thr | Thr | Asn | Pro 255 | His |
| Ile | Phe | Pro | Glu 260 | Gly | Ser | Glu | Pro | Lys 265 | Val | Tyr | Leu | Leu | Tyr 270 | Arg | Pro |

| | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|
| Gly | His | Tyr | Asp | Ile | Leu | Tyr | Lys |
| | | 275 | | | | | 280 |

<210> 649
 <211> 244
 <212> PRT
 <213> homo sapiens

<400> 649

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Asp | His | Leu | Gln | Pro | Gln | Lys | Asn | Leu | Cys | Thr | Cys | Leu | Ala | Pro | Gly |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Arg | Gly | Gly | Gln | Gln | Gly | Ser | Ser | Gly | Leu | Glu | Pro | Ala | Leu | Phe | Val |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Glu | Asp | Ile | Val | Val | Ser | Arg | Pro | Val | Glu | Lys | Val | Asp | Leu | Gly | Leu |
| | | 35 | | | | | 40 | | | | | 45 | | | |
| Gly | Ala | Leu | Arg | Glu | Asp | Val | Arg | Ile | Gly | Gly | Ala | Ala | Leu | Ala | Ala |
| | 50 | | | | | 55 | | | | | 60 | | | | |
| Val | His | Val | Leu | His | Leu | Asp | Gly | His | Ala | Glu | Gly | Leu | Gly | Gln | Arg |
| 65 | | | | | 70 | | | | | 75 | | | | | 80 |
| Asn | Asp | Val | Asp | Val | Val | Ala | Leu | Leu | Ala | His | Gly | Leu | His | Leu | Leu |
| | | | | 85 | | | | | 90 | | | | | 95 | |
| Leu | Ala | Glu | Leu | Leu | Asp | Ser | Pro | Ser | Thr | Leu | Asp | Glu | Val | Leu | Glu |
| | | | 100 | | | | | 105 | | | | | 110 | | |
| Glu | Leu | Ala | Leu | Ala | Leu | Gln | Val | Ala | Arg | Gly | Glu | Gln | Pro | Gln | Val |
| | | 115 | | | | | 120 | | | | | 125 | | | |
| Asp | His | Lys | Val | Val | Gly | Gly | Ala | Leu | Val | Ile | Glu | Gly | Gly | Gln | Gln |
| | 130 | | | | | 135 | | | | | 140 | | | | |
| Val | Gly | Asp | Arg | Gly | Leu | Leu | Leu | His | Leu | Leu | Asn | Gln | Val | His | Glu |
| 145 | | | | | 150 | | | | | 155 | | | | | 160 |
| Arg | Val | Val | Glu | Ile | Leu | Asn | Cys | Glu | Phe | Ser | Glu | Ala | Leu | Gly | His |
| | | | | 165 | | | | | 170 | | | | | 175 | |
| Gln | Val | Phe | Leu | Ala | Leu | Gly | Arg | His | Ser | Leu | Glu | Pro | Leu | Gln | Leu |
| | | | 180 | | | | | 185 | | | | | 190 | | |
| Leu | Ala | Val | Ile | Gln | Gln | Cys | Leu | Gln | Val | Gly | Glu | Ser | Glu | Ser | Pro |
| | | 195 | | | | | 200 | | | | | 205 | | | |
| Ile | Glu | Thr | Val | Ala | Val | Arg | Pro | Gly | Leu | Ala | Asp | Val | Arg | Val | Leu |
| | 210 | | | | | 215 | | | | | 220 | | | | |
| Phe | Val | Glu | Val | Leu | Asp | Leu | Leu | Leu | Ile | Asp | Val | Val | Ile | Phe | Ser |
| 225 | | | | | 230 | | | | | 235 | | | | | 240 |
| Ile | Leu | Leu | Val | | | | | | | | | | | | |

<210> 650
 <211> 424
 <212> PRT
 <213> homo sapiens

<400> 650

| | | | | | | | | | | | | | | | |
|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Leu 1 | Thr | Thr | Thr | Cys 5 | Val | Ser | Ser | Ser | Ala 10 | Pro | Ser | Lys | Thr | Ser 15 | Leu |
| Ile | Met | Asn | Pro 20 | His | Ala | Ser | Thr | Asn 25 | Gly | Gln | Leu | Ser | Val 30 | His | Thr |
| Pro | Lys | Arg 35 | Glu | Ser | Leu | Ser | His 40 | Glu | Glu | His | Pro | His 45 | Ser | His | Pro |
| Leu | Tyr 50 | Gly | His | Gly | Val | Cys 55 | Lys | Trp | Pro | Gly | Cys 60 | Glu | Ala | Val | Cys |
| Glu 65 | Asp | Phe | Gln | Ser | Phe 70 | Leu | Lys | His | Leu | Asn 75 | Ser | Glu | His | Ala | Leu 80 |
| Asp | Asp | Arg | Ser | Thr 85 | Ala | Gln | Cys | Arg | Val 90 | Gln | Met | Gln | Val | Val 95 | Gln |
| Gln | Leu | Glu | Leu 100 | Gln | Leu | Ala | Lys | Asp 105 | Lys | Glu | Arg | Leu | Gln 110 | Ala | Met |
| Met | Thr | His 115 | Leu | His | Val | Lys | Ser 120 | Thr | Glu | Pro | Lys | Ala 125 | Ala | Pro | Gln |
| Pro | Leu 130 | Asn | Leu | Val | Ser | Ser 135 | Val | Thr | Leu | Ser | Lys 140 | Ser | Ala | Ser | Glu |
| Ala 145 | Ser | Pro | Gln | Ser | Leu 150 | Pro | His | Thr | Pro | Thr 155 | Thr | Pro | Thr | Ala | Pro 160 |
| Leu | Thr | Pro | Val | Thr 165 | Gln | Gly | Pro | Ser | Val 170 | Ile | Thr | Thr | Thr | Ser 175 | Met |
| His | Thr | Val | Gly 180 | Pro | Ile | Arg | Arg | Arg 185 | Tyr | Ser | Asp | Lys | Tyr 190 | Asn | Val |
| Pro | Ile | Ser 195 | Ser | Ala | Asp | Ile | Ala 200 | Gln | Asn | Gln | Glu | Phe 205 | Tyr | Lys | Asn |
| Ala | Glu 210 | Val | Arg | Pro | Pro | Phe 215 | Thr | Tyr | Ala | Ser | Leu 220 | Ile | Arg | Gln | Ala |
| Ile 225 | Leu | Glu | Ser | Pro | Glu 230 | Lys | Gln | Leu | Thr | Leu 235 | Asn | Glu | Ile | Tyr | Asn 240 |
| Trp | Phe | Thr | Arg | Met 245 | Phe | Ala | Tyr | Phe | Arg 250 | Arg | Asn | Ala | Ala | Thr 255 | Trp |
| Lys | Asn | Ala | Val 260 | Arg | His | Asn | Leu | Ser 265 | Leu | His | Lys | Cys | Phe 270 | Val | Arg |
| Val | Glu | Asn 275 | Val | Lys | Gly | Ala | Val 280 | Trp | Thr | Val | Asp | Glu 285 | Val | Glu | Phe |
| Gln | Lys 290 | Arg | Arg | Pro | Gln | Lys 295 | Ile | Ser | Gly | Asn | Pro 300 | Ser | Leu | Ile | Lys |
| Asn 305 | Met | Gln | Ser | Ser | His 310 | Ala | Tyr | Cys | Thr | Pro 315 | Leu | Asn | Ala | Ala | Leu 320 |
| Gln | Ala | Ser | Met | Ala | Glu | Asn | Ser | Ile | Pro | Leu | Tyr | Thr | Thr | Ala | Ser |

| | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|
| | | | | 325 | | | | | 330 | | | | | 335 | | |
| Met | Gly | Asn | Pro | Thr | Leu | Gly | Asn | Leu | Ala | Ser | Ala | Ile | Arg | Glu | Glu | |
| | | | 340 | | | | | 345 | | | | | 350 | | | |
| Leu | Asn | Gly | Ala | Met | Glu | His | Thr | Asn | Ser | Asn | Glu | Ser | Asp | Ser | Ser | |
| | | 355 | | | | | 360 | | | | | 365 | | | | |
| Pro | Gly | Arg | Ser | Pro | Met | Gln | Ala | Val | His | Pro | Val | His | Val | Lys | Glu | |
| | 370 | | | | | 375 | | | | | 380 | | | | | |
| Glu | Pro | Leu | Asp | Pro | Glu | Glu | Ala | Glu | Gly | Pro | Leu | Ser | Leu | Val | Thr | |
| | 385 | | | | 390 | | | | | 395 | | | | | 400 | |
| Thr | Ala | Asn | His | Ser | Pro | Asp | Phe | Asp | His | Asp | Arg | Asp | Tyr | Glu | Asp | |
| | | | | 405 | | | | | 410 | | | | | 415 | | |
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<400> 651

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| 1 | | | | 5 | | | | | 10 | | | | | 15 | | |
| Gln | Arg | Ala | Pro | Ala | Ser | His | Asp | Asp | Pro | Pro | Ala | Cys | Glu | Val | Tyr | |
| | | | 20 | | | | | 25 | | | | | 30 | | | |
| Arg | Thr | Gln | Ser | Arg | Pro | Ser | Ala | Leu | Glu | Ser | Gly | Ile | Lys | Cys | His | |
| | | 35 | | | | | 40 | | | | | 45 | | | | |
| Ser | Leu | Gln | Val | Arg | Ile | Gly | Gly | Phe | Ser | Thr | Glu | Leu | Thr | Ser | Tyr | |
| | 50 | | | | | 55 | | | | | 60 | | | | | |
| Ser | Asn | Asp | Pro | Asn | Arg | Pro | Pro | Asp | Ser | Arg | His | Pro | Arg | Pro | Leu | |
| | 65 | | | | 70 | | | | | 75 | | | | | 80 | |
| Cys | His | His | Asn | His | Gln | His | Ala | His | Gly | Gly | Thr | His | Pro | Gln | Ala | |
| | | | | 85 | | | | | 90 | | | | | 95 | | |
| Val | Leu | Arg | Gln | Ile | Gln | Arg | Ala | His | Phe | Val | Ser | Arg | Tyr | Cys | Ala | |
| | | | 100 | | | | | 105 | | | | | 110 | | | |
| Glu | Pro | Arg | Ile | Leu | | | | | | | | | | | | |
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| His | Ile | Phe | Ile | Met | Ile | His | Thr | Asn | Leu | Lys | Lys | Lys | Phe | Ser | Cys | |
| | | | 20 | | | | | 25 | | | | | 30 | | | |

| | | | | | | | | | | | | | | | |
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| Cys | Val | Leu 35 | Val | Phe | Leu | Leu | Phe 40 | Ala | Val | Ile | Cys | Val 45 | Trp | Lys | Glu |
| Lys | Lys 50 | Lys | Gly | Ser | Tyr | Tyr 55 | Asp | Ser | Phe | Lys | Leu 60 | Gln | Thr | Lys | Glu |
| Phe 65 | Gln | Val | Leu | Lys | Ser 70 | Leu | Gly | Lys | Leu | Ala 75 | Met | Gly | Ser | Asp | Ser 80 |
| Gln | Ser | Val | Ser | Ser 85 | Ser | Ser | Thr | Gln | Asp 90 | Pro | His | Arg | Gly | Arg 95 | Gln |
| Thr | Leu | Gly | Ser 100 | Leu | Arg | Gly | Leu | Ala 105 | Lys | Ala | Lys | Pro | Glu 110 | Ala | Ser |
| Phe | Gln | Val 115 | Trp | Asn | Lys | Asp | Ser 120 | Ser | Ser | Lys | Asn | Leu 125 | Ile | Pro | Arg |
| Leu | Gln 130 | Lys | Ile | Trp | Lys | Asn 135 | Tyr | Leu | Ser | Met | Asn 140 | Lys | Tyr | Lys | Val |
| Ser 145 | Tyr | Lys | Gly | Pro | Gly 150 | Pro | Gly | Ile | Lys | Phe 155 | Ser | Ala | Glu | Ala | Leu 160 |
| Arg | Cys | His | Leu | Arg 165 | Asp | His | Val | Asn | Val 170 | Ser | Met | Val | Glu | Val 175 | Thr |
| Asp | Phe | Pro | Phe 180 | Asn | Thr | Ser | Glu | Trp 185 | Glu | Gly | Tyr | Leu | Pro 190 | Lys | Glu |
| Ser | Ile | Arg 195 | Thr | Lys | Ala | Gly | Pro 200 | Trp | Gly | Arg | Cys | Ala 205 | Val | Val | Ser |
| Ser | Ala 210 | Gly | Ser | Leu | Lys | Ser 215 | Ser | Gln | Leu | Gly | Arg 220 | Glu | Ile | Asp | Asp |
| His 225 | Asp | Ala | Val | Leu | Arg 230 | Phe | Asn | Gly | Ala | Pro 235 | Thr | Ala | Asn | Phe | Gln 240 |
| Gln | Asp | Val | Gly | Thr 245 | Lys | Thr | Thr | Ile | Arg 250 | Leu | Met | Asn | Ser | Gln 255 | Leu |
| Val | Thr | Thr | Glu 260 | Lys | Arg | Phe | Leu | Lys 265 | Asp | Ser | Leu | Tyr | Asn 270 | Glu | Gly |
| Ile | Leu | Ile 275 | Val | Trp | Asp | Pro | Ser 280 | Val | Tyr | His | Ser | Asp 285 | Ile | Pro | Lys |
| Trp | Tyr 290 | Gln | Asn | Pro | Asp | Tyr 295 | Asn | Phe | Phe | Asn | Asn 300 | Tyr | Lys | Thr | Tyr |
| Arg 305 | Lys | Leu | His | Pro | Asn 310 | Gln | Pro | Phe | Tyr | Ile 315 | Leu | Lys | Pro | Gln | Met 320 |
| Pro | Trp | Glu | Leu | Trp 325 | Asp | Ile | Leu | Gln | Glu 330 | Ile | Ser | Pro | Glu | Glu 335 | Ile |
| Gln | Pro | Asn | Pro 340 | Pro | Ser | Ser | Gly | Met 345 | Leu | Gly | Ile | Ile | Ile 350 | Met | Met |
| Thr | Leu | Cys 355 | Asp | Gln | Val | Asp | Ile 360 | Tyr | Glu | Ser | Leu | Pro 365 | Ser | Lys | Arg |

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| Lys | Thr | Asp | Val | Cys | Tyr | Tyr | Tyr | Gln | Lys | Phe | Phe | Asp | Ser | Ala | Cys |
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| Thr | Met | Gly | Ala | Tyr | His | Pro | Leu | Leu | Tyr | Glu | Lys | Asn | Leu | Val | Lys |
| 385 | | | | | 390 | | | | | 395 | | | | | 400 |
| His | Leu | Asn | Gln | Gly | Thr | Asp | Glu | Asp | Ile | Tyr | Leu | Leu | Gly | Lys | Ala |
| | | | | 405 | | | | | 410 | | | | | 415 | |
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 <213> homo sapiens

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| Leu | Leu | Ala | Asn | Pro | Pro | Gly | Ala | Ala | Gly | Pro | Ser | Gly | Pro | Gln | Glu |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Leu | Ala | Leu | Leu | Ser | Met | Gly | Gly | Lys | Val | Tyr | Trp | Val | Cys | Arg | Pro |
| | | 35 | | | | | 40 | | | | | 45 | | | |
| Arg | Pro | Ile | Phe | Leu | Arg | Met | Ile | Lys | Thr | His | Leu | Cys | Trp | Phe | Met |
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| Val | Thr | Cys | Ala | Ala | Gly | Phe | Gly | Asp | Ala | Glu | Val | Cys | Arg | Ser | Ile |
| 65 | | | | | 70 | | | | | 75 | | | | | 80 |
| Ser | Gly | Gly | Leu | Asp | Ala | Val | Leu | Pro | Phe | Ser | Leu | Trp | Cys | Trp | Leu |
| | | | | 85 | | | | | 90 | | | | | 95 | |
| Cys | Gly | Leu | Cys | Gly | Thr | Phe | Cys | Pro | Leu | Ala | Arg | Cys | Thr | Leu | Gly |
| | | | 100 | | | | | 105 | | | | | 110 | | |
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| Pro | Ala | Leu | Pro | Arg | Leu | Ala | Asn | Asn | Thr | Val | Arg | Met | Ala | Lys | Gly |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Asp | Pro | Lys | Lys | Pro | Lys | Gly | Lys | Met | Ser | Ala | Tyr | Ala | Phe | Phe | Val |
| | | 35 | | | | | 40 | | | | | 45 | | | |

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|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gln | Thr | Cys | Arg | Glu | Glu | His | Lys | Lys | Lys | Asn | Pro | Glu | Val | Pro | Val |
| | 50 | | | | | 55 | | | | | 60 | | | | |
| Asn | Phe | Ala | Glu | Phe | Ser | Lys | Lys | Cys | Ser | Glu | Arg | Trp | Lys | Thr | Met |
| 65 | | | | | 70 | | | | | 75 | | | | | 80 |
| Ser | Gly | Lys | Glu | Lys | Ser | Lys | Phe | Asp | Glu | Met | Ala | Lys | Ala | Asp | Lys |
| | | | | 85 | | | | | 90 | | | | | 95 | |
| Val | Arg | Tyr | Asp | Arg | Glu | Met | Lys | Asp | Tyr | Gly | Pro | Ala | Lys | Gly | Gly |
| | | | 100 | | | | | 105 | | | | | 110 | | |
| Lys | Lys | Lys | Lys | Asp | Pro | Asn | Ala | Pro | Lys | Arg | Pro | Pro | Ser | Gly | Phe |
| | | 115 | | | | | 120 | | | | | 125 | | | |
| Phe | Leu | Phe | Cys | Ser | Glu | Phe | Arg | Pro | Lys | Ile | Lys | Ser | Thr | Asn | Pro |
| | 130 | | | | | 135 | | | | | 140 | | | | |
| Gly | Ile | Ser | Ile | Gly | Asp | Val | Ala | Lys | Lys | Leu | Gly | Glu | Met | Trp | Asn |
| 145 | | | | | 150 | | | | | 155 | | | | | 160 |
| Asn | Leu | Asn | Asp | Ser | Glu | Lys | Gln | Pro | Tyr | Ile | Thr | Lys | Thr | Ala | Lys |
| | | | | 165 | | | | | 170 | | | | | 175 | |
| Leu | Lys | Glu | Lys | Tyr | Glu | Lys | Asp | Val | Ala | Asp | Tyr | Lys | Ser | Lys | Gly |
| | | | 180 | | | | | 185 | | | | | 190 | | |
| Lys | Phe | Asp | Gly | Ala | Lys | Gly | Pro | Ala | Lys | Val | Ala | Arg | Lys | Lys | Val |
| | | 195 | | | | | 200 | | | | | 205 | | | |
| Glu | Glu | Glu | Asp | Glu | Glu | Asp | Gly | Gly | Gly | Gly | Gly | Gly | Gly | Gly | Gly |
| | 210 | | | | | 215 | | | | | 220 | | | | |
| Gly | Thr | Tyr | Ser | Arg | Val | Gly | Trp | Trp | Ser | Ser | Pro | Lys | Glu | Gly | Glu |
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| Leu | Leu | Leu | Leu | Ala | Ser | Leu | Ser | Trp | Ser | Ile | Ile | Leu | His | Phe | Pro |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Ile | Ile | Ala | His | Phe | Ile | Cys | Leu | Cys | His | Phe | Ile | Lys | Phe | Arg | Phe |
| | | 35 | | | | | 40 | | | | | 45 | | | |
| Leu | Phe | Pro | Gly | His | Arg | Leu | Pro | Pro | Leu | Arg | Ala | Leu | Leu | Gly | Lys |
| | 50 | | | | | 55 | | | | | 60 | | | | |
| Phe | Arg | Lys | Ile | Asp | Arg | Asp | Leu | Trp | Val | Phe | Leu | Leu | Met | Phe | Phe |
| 65 | | | | | 70 | | | | | 75 | | | | | 80 |
| Ser | Ala | Cys | Leu | His | Lys | Glu | Gly | Ile | Ser | Gly | His | Leu | Ala | Leu | Trp |
| | | | | 85 | | | | | 90 | | | | | 95 | |

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|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
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| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Thr | Thr | Arg | Gln | Glu | Leu | Ser | His | Ala | Leu | Tyr | Gln | His | Asp | Ala | Ala |
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| Cys | Arg | Val | Ile | Ala | Arg | Leu | Thr | Lys | Glu | Val | Thr | Ala | Ala | Arg | Glu |
| | | 35 | | | | | 40 | | | | | 45 | | | |
| Ala | Leu | Ala | Thr | Leu | Lys | Pro | Gln | Ala | Gly | Leu | Ile | Val | Pro | Gln | Ala |
| | 50 | | | | | 55 | | | | | 60 | | | | |
| Val | Pro | Ser | Ser | Gln | Pro | Ser | Val | Val | Gly | Ala | Gly | Glu | Pro | Met | Asp |
| 65 | | | | | 70 | | | | | 75 | | | | | 80 |
| Leu | Gly | Glu | Leu | Val | Gly | Met | Thr | Pro | Glu | Ile | Ile | Gln | Lys | Leu | Gln |
| | | | | 85 | | | | | 90 | | | | | 95 | |
| Asp | Lys | Ala | Thr | Val | Leu | Thr | Thr | Glu | Arg | Lys | Lys | Arg | Gly | Lys | Thr |
| | | | 100 | | | | | 105 | | | | | 110 | | |
| Val | Pro | Glu | Glu | Leu | Val | Lys | Pro | Glu | Glu | Leu | Ser | Lys | Tyr | Arg | Gln |
| | | 115 | | | | | 120 | | | | | 125 | | | |
| Val | Ala | Ser | His | Val | Gly | Leu | His | Ser | Ala | Ser | Ile | Pro | Gly | Ile | Leu |
| | 130 | | | | | 135 | | | | | 140 | | | | |
| Ala | Leu | Asp | Leu | Cys | Pro | Ser | Asp | Thr | Asn | Lys | Ile | Leu | Thr | Gly | Gly |
| 145 | | | | | 150 | | | | | 155 | | | | | 160 |
| Ala | Asp | Lys | Asn | Val | Val | Val | Phe | Asp | Lys | Ser | Ser | Glu | Gln | Ile | Leu |
| | | | | 165 | | | | | 170 | | | | | 175 | |
| Ala | Thr | Leu | Lys | Gly | His | Thr | Lys | Lys | Val | Thr | Ser | Val | Val | Phe | His |
| | | | 180 | | | | | 185 | | | | | 190 | | |
| Pro | Ser | Gln | Asp | Leu | Val | Phe | Ser | Ala | Ser | Pro | Asp | Ala | Thr | Ile | Arg |
| | | 195 | | | | | 200 | | | | | 205 | | | |
| Ile | Trp | Ser | Val | Pro | Asn | Ala | Ser | Cys | Val | Gln | Val | Val | Arg | Ala | His |
| | 210 | | | | | 215 | | | | | 220 | | | | |
| Glu | Ser | Ala | Val | Thr | Gly | Leu | Ser | Leu | His | Ala | Thr | Gly | Asp | Tyr | Leu |
| 225 | | | | | 230 | | | | | 235 | | | | | 240 |
| Leu | Ser | Ser | Ser | Asp | Asp | Gln | Tyr | Trp | Ala | Phe | Ser | Asp | Ile | Gln | Thr |
| | | | | 245 | | | | | 250 | | | | | 255 | |
| Gly | Arg | Val | Leu | Thr | Lys | Val | Thr | Asp | Glu | Thr | Ser | Gly | Cys | Ser | Leu |
| | | | 260 | | | | | 265 | | | | | 270 | | |
| Thr | Cys | Ala | Gln | Phe | His | Pro | Asp | Gly | Leu | Ile | Phe | Gly | Thr | Gly | Thr |
| | | 275 | | | | | 280 | | | | | 285 | | | |

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|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Asp | Ser | Gln | Ile | Lys | Ile | Trp | Asp | Leu | Lys | Glu | Arg | Thr | Asn | Val |
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| Ala | Asn | Phe | Pro | Gly | His | Ser | Gly | Pro | Ile | Thr | Ser | Ile | Ala | Phe | Ser |
| 305 | | | | | 310 | | | | | 315 | | | | | 320 |
| Glu | Asn | Gly | Tyr | Tyr | Leu | Ala | Thr | Ala | Ala | Asp | Asp | Ser | Ser | Val | Lys |
| | | | | 325 | | | | | 330 | | | | | 335 | |
| Leu | Trp | Asp | Leu | Arg | Lys | Leu | Arg | Thr | Leu | Arg | Leu | Cys | Ser | Trp | Ile |
| | | | 340 | | | | | 345 | | | | | 350 | | |
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<213> homo sapiens

<400> 657

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| Gln | Val | Val | Thr | Ile | Leu | Arg | Glu | Gly | Asp | Ala | Ser | Asp | Gly | Ala | Arg |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Val | Ala | Arg | Glu | Val | Gly | His | Ile | Ser | Thr | Phe | Leu | Gln | Val | Pro | Asp |
| | | 35 | | | | | 40 | | | | | 45 | | | |
| Leu | Asp | Leu | Arg | Val | His | Gly | Ser | Cys | Ser | Lys | Asp | Glu | Ser | Val | Arg |
| | 50 | | | | | 55 | | | | | 60 | | | | |
| Val | Glu | Leu | Cys | Thr | Gly | Glu | Arg | Ala | Ala | Gly | Gly | Leu | Ile | Cys | His |
| 65 | | | | | 70 | | | | | 75 | | | | 80 | |
| Leu | Gly | Glu | His | Thr | Pro | Cys | Leu | Asp | Val | Arg | Glu | Ser | Pro | Val | Leu |
| | | | | 85 | | | | | 90 | | | | | 95 | |
| Ile | Ile | Gly | Gly | Ala | Gln | Glu | Ile | Val | Ala | Ser | Gly | Met | Lys | Ala | Glu |
| | | | 100 | | | | | 105 | | | | | 110 | | |
| Ala | Cys | His | Ser | Thr | Leu | Met | Gly | Pro | Asn | His | Leu | Tyr | Thr | Arg | Gly |
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| Ile | Gly | Asp | Arg | Pro | Asn | Pro | Asp | Ser | Gly | Ile | Gly | Gly | Ser | Arg | Lys |
| | 130 | | | | | 135 | | | | | 140 | | | | |
| His | Gln | Val | Leu | Gly | Arg | Val | Lys | His | His | Ala | Gly | Asp | Leu | Leu | Gly |
| 145 | | | | | 150 | | | | | 155 | | | | | 160 |
| Met | Ala | Phe | Glu | Gly | Ser | Gln | Asp | Leu | Phe | Arg | Thr | Phe | Val | Lys | His |
| | | | | 165 | | | | | 170 | | | | | 175 | |
| Asn | Asp | Ile | Phe | Ile | Arg | Pro | Thr | Ser | Glu | Asp | Leu | Val | Gly | Val | Gly |
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| Arg | Ala | Glu | Val | Gln | Gly | Gln | Asp | Pro | Arg | Asn | Ala | Gly | Thr | Val | Gln |
| | | 195 | | | | | 200 | | | | | 205 | | | |
| Pro | His | Val | Gly | Cys | His | Leu | Pro | Val | Phe | Ala | Glu | Leu | Phe | Trp | Leu |

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| His | Gln | Leu | Leu | Arg | His | Ser | Leu | Pro | Ser | Leu | Leu | Ala | Leu | Arg | Gly | |
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<400> 658

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| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Ala | Lys | Asp | Thr | Gln | Ile | Lys | Glu | Ser | Leu | Trp | Leu | Arg | Thr | Gln | Gly |
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| Arg | Glu | Val | Pro | Gly | Leu | Cys | Pro | Cys | Trp | Ala | Arg | Arg | Arg | Leu | Gly |
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| Thr | Lys | Trp | Glu | Lys | Cys | Trp | Glu | Gly | Leu | Ser | Gly | Arg | Gly | His | Lys |
| | 50 | | | | | 55 | | | | | 60 | | | | |
| Ser | Ser | Gly | Gly | Gln | His | Cys | Arg | Gln | Val | Met | Gly | Gly | Thr | His | Gly |
| 65 | | | | | 70 | | | | | 75 | | | | | 80 |
| Asp | Leu | Ala | Ala | Asn | Ser | Cys | Cys | Gly | Gly | Val | Ser | Leu | Val | Leu | Pro |
| | | | | 85 | | | | | 90 | | | | | 95 | |
| Pro | Gly | Gly | Pro | Leu | Leu | Gly | Ser | Trp | Arg | Gly | Pro | Thr | Lys | Gly | His |
| | | | 100 | | | | | 105 | | | | | 110 | | |
| Arg | Thr | Gly | Ser | Pro | Gly | Trp | Leu | Val | Gln | Leu | Gly | Met | Lys | Ala | Arg |
| | | 115 | | | | | 120 | | | | | 125 | | | |
| Glu | Lys | Arg | Val | Leu | Cys | Ser | Gly | Arg | Ile | Gly | Pro | Asp | Ala | Glu | Ala |
| | 130 | | | | | 135 | | | | | 140 | | | | |
| Glu | Ala | Leu | Pro | Val | Thr | Cys | Gly | Arg | Ser | Ala | Leu | Ser | Leu | Pro | Gly |
| 145 | | | | | 150 | | | | | 155 | | | | | 160 |
| Thr | Leu | | | | | | | | | | | | | | |

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 <211> 148
 <212> PRT
 <213> homo sapiens

<400> 659

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| Arg | Leu | Trp | Thr | Ala | Phe | His | Gly | Leu | Arg | Ala | Gly | Asp | Glu | Ala | Thr |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Arg | Arg | Pro | Gly | Leu | Pro | Glu | His | Leu | His | Gly | Pro | Ala | Val | Ser | His |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Arg | Gly | Asp | Gly | Gln | Arg | Asp | Pro | Ala | Tyr | Leu | Cys | Trp | Gln | Gln | Glu |
| | | 35 | | | | | 40 | | | | | 45 | | | |
| Arg | His | Gly | Ala | Pro | Glu | Glu | Arg | Tyr | His | Pro | Cys | Pro | Gly | Pro | Ser |
| | 50 | | | | | 55 | | | | | 60 | | | | |

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|------------|------------|------------|------------|-----------|-----------|------------|------------|------------|-----------|-----------|------------|------------|------------|-----------|-----------|
| Gln 65 | Arg | Val | Pro | Gly | Arg 70 | Asp | Arg | Ala | Glu | Arg 75 | Pro | His | Val | Thr | Gly 80 |
| Ser | Ala | Ser | Ala | Ser 85 | Ala | Ser | Gly | Pro | Ile 90 | Arg | Pro | Leu | Gln | Ser 95 | Thr |
| Arg | Phe | Ser | Leu 100 | Ala | Phe | Ile | Pro | Ser 105 | Cys | Thr | Asn | His | Pro 110 | Gly | Leu |
| Pro | Val | Leu 115 | Cys | Pro | Leu | Val | Gly 120 | Pro | Leu | Gln | Glu | Pro 125 | Arg | Ser | Gly |
| Pro | Pro 130 | Gly | Gly | Ser | Thr | Lys 135 | Asp | Thr | Pro | Pro | Gln 140 | Gln | Glu | Leu | Ala |
| Ala 145 | Arg | Ser | Pro | | | | | | | | | | | | |

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